

THE DENTAL DIGEST

GEORGE WOOD CLAPP, D.D.S., Editor

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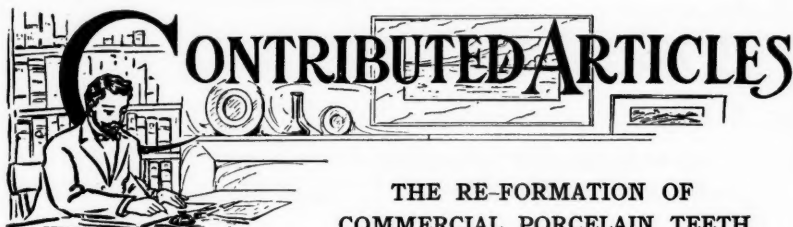
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THE RE-FORMATION OF COMMERCIAL PORCELAIN TEETH

TO ADAPT THEM TO A GIVEN CASE *

By NORMAN S. ESSIG, D.D.S., PHILADELPHIA, PA.

This is an abstract of a clinical lecture which was given in connection with the exhibition of certain models which made clear the points dwelt upon in the paper. There are here reproduced illustrations of two models, but the black and white of the paper and ink utterly fail to convey the teachings which one got from the models.

The first part of the paper dealt with the requirements of good practice in connection with the impression and model. For the sake of brevity this part of the paper has been eliminated.—EDITOR.

THE introduction of detached pin porcelain crowns makes it preferable to discard, wherever practicable, the old method of backing our porcelain teeth with gold. Swaging devices and the casting machines make it possible to convert to our use almost any form of tooth in conjunction with both vulcanite and metallic plates. This not only gives us the most artistic results, but embodies the interchangeable features which we now regard as desirable in all cases.

* Read before the New Hampshire State Dental Society Convention, June, 1912.

Cast bases for porcelain crowns can be soldered to metallic plates and are capable of being rendered most natural in appearance, and present a much more natural surface to the tongue.

We now come to the subject of this paper as designated by its title, "The Re-formation of Commercial Porcelain Teeth to Adapt Them to a Given Case."

The re-formation of porcelain teeth adapting them to given cases means, in a large majority of instances, the selection of proper teeth and the grinding which every porcelain tooth requires before it can be used. It does not include the modifying of its general form and surface or shade, together with the addition of such characteristic features as enamel spots, erosion, maldevelopment of surface or other peculiarities, which together form the identity of the particular mouth under consideration.

In contemplating our best porcelain teeth, it is a noticeable fact that the lines are a collection of long and uninterrupted curves. This type of tooth is often found in normal mouths to embody half curves or small curves, due to wear or other conditions which may be classed as abnormal.

Porcelain teeth, as we obtain them, represent the teeth of the young adult and should be considered by the dentist as his raw material.

In the construction of a technical piece where the conditions are ideal or where the patient is edentulous, it is more or less simple to arrange according to a rule or system the porcelain teeth which have been moulded anatomically. In partial cases, in bridgework and individual crowns, it is often impossible to adhere to any system without modification. But re-formation with the anatomical forms and articulation will give us more nearly the condition I have in mind than anything else.

Patients very frequently sacrifice a tooth or teeth which have been troublesome and as long as there is plenty of masticating surface, do not miss the lost members, in fact, do not think of them again until suddenly confronted with the fact that the arch has lost its integrity, and that the remaining teeth are tilting. Those having no antagonists elongate, and other conditions arise from the resulting malocclusion. Such cases prevent our adhering to any system of anatomical occlusion and ideal tooth forms.

The individuality and skill of the prosthetist, the act and judgment he expends in the restoration of such a mouth is the one remedy to be applied. The time will never come when the artistic attainment and finger skill and general knowledge of the subject will not have to be expended by the prosthetist in every case which presents to him for service.

Whenever the enamel covering of a tooth is destroyed, there comes in time a strain or difference in shade which at once breaks up the uniformity of color and makes it impossible for us to duplicate the teeth in the stock of a dental depot. This discoloration probably takes place to a greater extent in men, especially those using tobacco, the denuded tooth structure coloring almost with the same readiness as meerschaut. If we carefully study such a tooth it will be found that the discoloration is less on the highest points of the surface presented to view; in other words, that portion of the tooth which is not readily reached with the brush is less stained. The interspaces and irregularities of surface which the brush and soft tissue of the mouth and tongue do not continually clean during mastication and speech, are more deeply discolored, and this renders more noticeable the inequalities of surface and half curves of which I have spoken.

A crack in the enamel wall often becomes stained and noticeable, finally forming a characteristic feature of the tooth on which it occurred and consequently the mouth itself, so that its absence in an artificial tooth replacing the original would attract attention even though the average layman could not tell just where the difference was.

Natural teeth as a rule are constricted at the neck or gingival margin, and each year this fact becomes more noticeable. The characteristic form of a tooth is below the line of demarcation clearly shown by the portions covered with enamel, and the difference in color between the enamel and dentine is most noticeable at this point, unless, as in some instances, there has been an erosion which causes a blending of the shades, due to the gradual diminishing of the enamel coating. If, however, there is no erosion, the darkest part of the exposed dentine is just where one stops and the other begins. There is often a depression or inequality in the surfaces of teeth, which I will demonstrate later with specimens. These inequalities may occur either upon the labial or lingual surfaces, but in every instance there is a discoloration which is darkest in the depression. The best that apparently can be accomplished with the brush is the cleansing of the prominent portions of the surfaces of the teeth. Therefore, in the re-formation of porcelain teeth, we first render the surfaces irregular, either by copying natural teeth or by design on our part to break up the noticeably false appearance presented by the conventional set of fourteen teeth.

If we attempt to stain a tooth with paint and brush, we must possess an unusual degree of artistic ability to make it a perfect imitation, so if we review the remarks I have just made upon the subject, it will be seen that the tooth will practically stain itself if we imitate the irregular surface. The coloring matter on being wiped off, the highest point will

be cleansed, the coloring matter remaining in the depressions. If we expend a little thought on each case it simplifies itself, and what may seem to be a difficult department of prosthetic work will prove anything but complex. Most artistic results can be produced apparently without effort.

The wear that takes place on the cusps and cutting edges of the teeth in the normal mouth is seldom due to anything but the lateral or grinding motion at the point where they will come in contact with the teeth to which they are opposed, and the anatomical articulator will, if moved laterally, show the points which are first to wear. If the por-

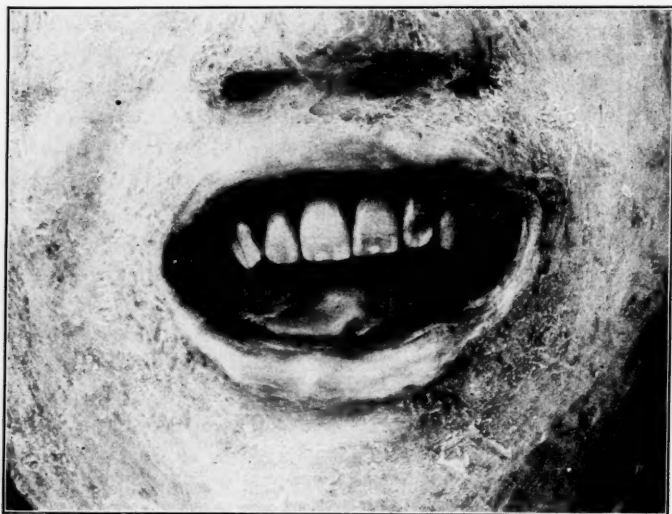


Illustration No. 1—Alternate teeth are artificial. They practically defy detection from the labial.

celain teeth are ground slightly at these points, the effect produced is very natural, because the irregularity of the cutting edges is caused by wear and does not happen at random.

I am convinced that the anatomical articulator will produce wonderful improvements in artistic results and very material benefits in articulation itself, but owing to the great difference in cases and the many abnormal features presented by teeth individually, we are often unable to follow any system to a satisfactory completion.

In the selection of teeth, when the replacement of several is demanded, the shades should be broken up and the porcelain teeth selected from odd collections of single teeth, bearing in mind that the canines

are generally darker than any other anterior teeth. Their surfaces may be changed or enlarged by the addition of porcelain, preferably of a high-fusing type, which may be used satisfactorily by mixing it to the desired consistency with gum tragacanth. This addition should be dried over a heater or in the muffle to drive off the moisture. This renders it hard, so that it may be cut or carved in any manner desired. The results thus obtained are very pleasing, and if these teeth are baked separately it will be found that the differences in shade resulting will be about the same as that occurring in the natural teeth. It will also be found that the porcelain blends with the shade selected in the first place; also that the

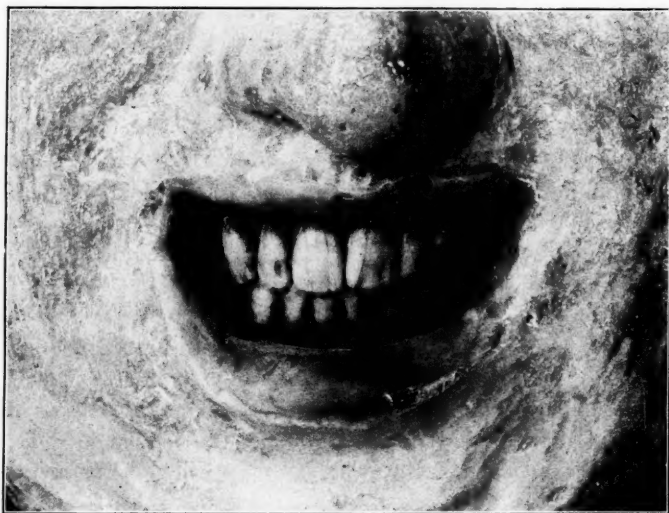


Illustration No. 2—The three teeth on the right are artificial. Like the ones in Illustration No. 1, they practically defy detection.

inequalities of color or other characteristic features showing through their surface can be produced by first painting the defect with mineral paints and burning before applying additional porcelain.

As it is possible for us to grade the materials, commencing with the dentine and following each step to the surface just as in nature, a reproduction will result that so closely resembles the natural teeth that detection is impossible.

It matters not how slight the re-formation is, when once the surface is removed from a porcelain tooth there is instantly an improvement and the effect is marvelous, and sometimes our very inability to grind two alike will result greatly to our advantage. The most necessary require-

ment of the fundamental work is sufficient material to grind or re-form, for by the judicious grinding, or addition of porcelain in the manner I have described, we can compensate for any deficiency. I frequently use a small lateral or canine for a foundation, and in this way make a large central to suit the case in hand. By keeping on hand a piece of platinum tubing and building to it the mixture of gum tragacanth and porcelain, we can make our own crowns whenever necessary, and there is probably nothing that makes us so independent, especially in emergency cases. It is, of course, necessary in extensive cases, or when certain effects are desired, to start with a large tooth in order to have enough material to make our re-formation; therefore, the larger moulds should be used if it is possible to obtain them, and the dental depots encouraged to keep on hand extra large moulds for this purpose.

In artistic and absolute reproduction of the organs of mastication we embody the highest type of art and finger skill. This removes the prosthetist at once from the plane of mechanical dentistry and places him in a class by himself. Anyone selecting this branch of dentistry enters an unlimited field, both from the standpoint of the artistic possibilities and also of remuneration.

Re-forming a porcelain tooth with a carborundum wheel is only drawing with a different kind of a pencil. Most of us can draw to a greater or lesser degree, and it is not uncommon to find a person who can draw almost any subject he sees with varying accuracy. Therefore, I believe that with but little instruction facility can be developed along other artistic lines, and it probably only requires a little extra training of the hand. The all-important feature is the first instruction, to show the pupil just what to look for, after which practice will give him increasing ability.

It is impossible for anyone to develop artistic ability at once, and it is not unusual for some one to remark: "I would not attempt to do this work because I am not an artist." How many men who are great to-day could show proficiency at the beginning of their career? I see no reason why the profession of dentistry should differ materially from other arts, and if the art of reproducing natural teeth be systematized and taught with the same thoroughness as the musician, sculptor or other artists receive instruction, there should be no doubt as to the ultimate result. I have continually claimed that this branch of our profession is not viewed or taught from a sufficiently artistic standpoint, which fact I have no doubt explains the great lack of interest shown in the subject, and a consequent falling away from the standards of excellence so noticeable at the present day.

THE HUMAN TEETH

By L. P. HASKELL, D.D.S., CHICAGO, ILL.

NOTHING in the human frame is more perfect or beautiful than the teeth. A perfect set of teeth, as seen at a glance, in the mouth of a pretty face, is one of its most noticeable features, always admired.

But when we consider in detail their construction and arrangement, we find a wonderful work, one which never was the result of evolution.

Their shapes in their various classes: The central incisors, in their perfect forms in the nervous type, long, almond-shaped; the laterals narrower and similar in shape; the cuspids forming an angle in the jaw, and changing in shape, curved and pointed. Nothing could be more appropriate. Then come the bicuspid, similar in shape to the cuspids, but smaller instead of having the wide molars far forward.

Then the bilious type, large, longer than wide, angular. The sanguineous, well proportioned, curved and rounded. The lymphatic, large width predominating. Yet in all types there is perfect symmetry.

Then the coloring of the teeth, so perfectly adapted to the temperaments of the individuals.

The nervous, pearl blue and translucent.

The bilious, brownish yellow, opaque.

The sanguineous, straw yellow and translucent.

The lymphatic, dark gray, opaque.

Then on the lingual side there is perfect contour, no angles, the surfaces rounded and outline perfect from the concave incisors to the convex cuspids, the thickened bicuspid to the wide molars a perfectly symmetrical line.

But one of the most wonderful things is the discovery by Dr. Bonwill that the permanent teeth are shaped and arranged along geometrical lines, and that after an examination of more than a thousand skulls, modern, ancient, prehistoric, as far back as they have been found of all races.

He found there was a relative proportion in width of the different classes of teeth, centrals, laterals, bicuspid, and molars, no trio of which are of the same width.

Then he found that the six anterior teeth form the arc of a circle, the radius of which is the width of the central lateral and cuspid teeth. The proof of his theory is found in the fact that a circle thus made and applied to the incisors, a line through the center of the circle will always pass through the center of the second bicuspid, and a line

across the posterior margin of the circle will pass the posterior margin of the second molars.

I have often verified the theory by applying it to models of the natural teeth.

FLETCHERIZATION OF FOOD

By J. F. TEUFERT, D.D.S., YUMA, ARIZ.

WHEN the world was young, primitive man, guided by instinct and perhaps compelled by necessity, gathered fruits, nuts and herbs for his meals, eating slowly and masticating every mouthful thoroughly, enjoying life to the utmost. His physical development was perfect and he did not even dream of the ailments of the present generation.

As civilization advanced and foodstuffs grew more plentiful man did not have to search for food, as he had learned to grow large quantities and varieties and store them away to provide against scarcity. Being socially inclined, men formed societies and came together to eat, drink and be merry. On such occasions large quantities of different foods were consumed and the drinking habit also introduced, which is still very conspicuous at present-day banquets.

Man thus gradually lost his natural instinct to eat slowly and only when hungry; and later, with the introduction of all kinds of prepared and predigested foods, mastication became a lost art.

To Horace Fletcher, in my opinion the greatest living man, is due the credit of rediscovering the proper method of mastication.

There is undoubtedly a great deal of chewing done in this country in the way of chewing gum or tobacco, but food is generally hastily chewed or bolted down, or washed down with either hot or cold drinks. The average man or woman to-day is not masticating his or her food properly and is making of his or her stomach either a swill barrel or an ice chest, or both, so that they are very much in need of Mr. Fletcher.

Mr. Fletcher is a man past middle age who was at one time suffering from chronic ailments, on account of which he had been refused insurance by life insurance companies and given up by medical men to die. He began thinking about what was the matter with him, and found his trouble to be due to his coarse way of eating; so he reduced the quantity of food and began chewing slowly, thoroughly and deliberately. In a short time he was cured and able to take out a life insur-

ance policy. His weight was reduced from 205 pounds to 160 pounds, which is his normal weight. He is now preaching the gospel of health by thorough mastication.

Fletcherism is the art of properly masticating the food.

The different steps in the process are as follows:

1. Mental attitude, a contented, cheerful frame of mind.
2. The appetite must be pronounced. There must be a desire for some *simple* food, accompanied by a flow of saliva in the mouth. A false appetite is shown by a craving for food and an all-gone feeling in the region of the stomach. The normal system always craves the food it needs.

3. A good set of teeth and a clean mouth are essential.

4. All food, liquid as well as solid, should be chewed to a liquid state until all taste is taken out of it, when the process of swallowing follows unconsciously. Until such a state is reached the food should be returned from the back of the mouth for remastication to a finer state. All fibrous and stringy particles that cannot be reduced to a liquid should be rejected and not swallowed.

This kind of mastication will produce a perfect mixture in salivation and chemical change in the mouth, relieving the stomach and intestines of extra work.

5. The quantity of food is reduced to one half, thus solving the question of the growing grocery bill.

6. The time required for Fletcherizing is from fifteen to twenty minutes for each meal.

7. Proper food: Man, being naturally a frugivorous animal, should use the unfired natural food, because it is most readily adapted to perfect mastication. It has the necessary coarseness and crispness for chewing. The elements are in the natural state, giving the body all the tissue salts, proteids, carbohydrates and hydrocarbons for perfect body-building. There is little or no waste.

The cooking of food alters the composition and precipitates the mineral salts which are often thrown away with the water used in cooking, rendering the food a starvation diet. It also makes food too soft for mastication.

Patent breakfast foods and predigested foods are unfit for Fletcherization.

ADVANTAGES OF FLETCHERIZATION

1. The quantity of food is reduced to a minimum, while a better quality is demanded.
2. The body is more perfectly nourished and enjoys better health.

3. Real strength is produced; waste products are reduced to a minimum.

4. The excreta are inoffensive.

5. There is no dyspepsia or constipation.

6. Teeth do not decay if properly used in mastication and the proper food is eaten.

Thus I have given you the essentials of Fletcherization and hope you will put this theory into practice.

Do not chew gum or tobacco between meals; but at mealtime it is up to you to chew, chew, chew.

BROKEN INSTRUMENTS

By CHARLES E. FELLMAN, D.D.S., SUTTON, NEB.

THERE is nothing that causes a dental operator more chagrin than the accident of breaking an instrument in a pulp canal. Due attention to the work in hand will generally prevent any mishap of this nature, regardless as to what method is followed. The task of cleansing nerve canals is one so frequently performed that it may be done without a great degree of concentration. But when the thoughts are allowed to wander there may be liberated just a trifle more of nervous energy than is required and the result is a broken instrument. If a barbed broach impinges upon the walls of a canal to any extent no effort to turn it should be made, but the pulp tissue should be literally raked out of the canal by a straight upward and downward motion. The diameter of the canal can also be increased in this manner if constrictions are present. A broach should not be twisted while bent. It is convenient to shorten the barbed broaches and grasp them between the thumb and index finger in some cases. They are prepared for use as follows: The shaft of the broach is cut off by means of a knife-edged stone, leaving the broach about one and one eighth inches long. About an eighth of an inch of the shaft is now turned over to form a right angle, and about this should be kneaded a ball of cement, perhaps an eighth of an inch in diameter. If a good brand of cement is used, the broach can be sterilized without interfering with the integrity of the "handle." A half dozen broaches can be prepared in this way in a few moments.

These shortened broaches can be used in the buccal roots of upper molars, in the anterior roots of lower molars, also in bicuspid roots if

the cavity occurs upon the distal surface. Other canals may be reached by means of the ordinary broach carrier in the ordinary holder.

There is no advantage to be gained by shortening the smooth broach. If one of these should break, the fragment would be withdrawn by means of the cotton which is always wound about these broaches when they are used. The Kerr broach should not break under ordinary usage; but if there is a sharp turn in a root, and a reamer is forced beyond this curve and twisted it will probably break, as many of us have learned from experience. In order to avoid this accident it is a good plan to ream out the first two thirds of the canal only, by means of the Kerr broach, and depend upon ordinary barbed or plain broaches with which to clear out the apical one third of the canal.

Those who find difficulty in obtaining good quality of reamers should order them directly from the manufacturer. One is thus assured of obtaining a broach that is genuine, and also newly made. Reamers that have been made for some time lose the quality of toughness, as has been pointed out by writers upon the subject of Operative Dentistry.

Treating root canals calls for a greater degree of care and delicacy of manipulation than anything else pertaining to dentistry.

Bad teeth are destroying our citizens. The annual statement issued by the New Orleans naval recruiting station, at 730 Common Street, shows some very surprising facts, including the destruction from bad teeth. No less than 1076 men applied to the station during 1911, and of this number 664 were rejected and of this number 483 had physical defects. In discussing the rejections, Dr. Jas. A. Randall, examining surgeon, said that the teeth were the biggest defect. "It is surprising the number of men that have poor teeth," said Dr. Randall, "and I think the evil is worse here than in other places. The deplorable condition is due absolutely and almost entirely to neglect."—*Practical Dental Journal*.

A little more patience, a little more charity for all, a little more devotion, a little more love; with less bowing down to the past, and a silent ignoring of pretended authority; a brave looking forward to the future with more faith in our fellows, and the race will be ripe for a great burst of light and life.—ELBERT HUBBARD.

GASTRIC DYSPEPSIA—ACUTE GASTRITIS

BY ALONZO MILTON NODINE, D.D.S., NEW YORK

This is the first of a series of articles by this author. Each article will be short, to the point and scientifically accurate. While the articles have a common thread, they are not dependent one on the other.—
EDITOR.

FAT and folly, feasts and feasting, fast and furious eating, fermented food and foul teeth, make a fizzle of digestion.

The death of three celebrities, Rear-Admiral Evans, Alfred Charles Dickens and King Frederick VIII. of Denmark, increases the score of famous men who have stepped on the ferryboat that plies the river Styx, with their passports to eternity signed by acute dyspepsia.

Digestion is a cog-wheel in the machine that transforms food into body energy, and repairs and renews the machine. Stripping one cog—digestion—off the wheel, will throw the whole transmission out of gear. When the mechanism of nutrition breaks down, the materials for the growth and repair of the human organism are not furnished, and the reserve of stored-up energy is drawn upon until exhausted. Under such a condition the body may starve with plenty of food at hand.

The stomach is a combination of a churn and washing machine, a cream separator and sausage machine, a chemical retort and syringe.

As each of these devices is designed to accomplish one particular thing, so each function of the stomach is devised for one special end. A churn will not produce butter from sour milk, neither will the stomach manufacture good chyle from fermented food. A washing machine will not pound out the dirt from a mattress or a feather bed, neither will the stomach get the best elements of nutrition out of a large mass of unmasticated food.

A cream separator will not separate tar from sand, neither will the stomach separate the soluble food ingredients from an undue mixture of fat and grease. A sausage machine will not convert bones into sausage meat, neither will the stomach change insoluble substances into absorbable food stuff. In a chemical retort the proper reaction will not take place if the chemicals are impure, or antagonizing elements are part of the mixture. In the stomach pepsin will not act in the presence of excess alkalinity; and an excess of alkalinity makes easy the fermentation of starch and sugars with the production of lactic, butyric and acetic acids—abnormal, harmful factors of perverted digestion.

A diet of mixed food elements well masticated is necessary to promote the secretion of the digestive ferments, and to facilitate the passage of the chyle into the small intestine.

Normal gastric digestion takes place under the following conditions: Starting with fresh, clean, properly cooked food of moderate variety, sound teeth in correct occlusion, will so divide the food, and mix it with the saliva as to start the necessary chemical changes in sugars and starches. Mastication also stimulates the secretion of the gastric juice, so that when food reaches the stomach there will have been secreted an adequate amount of pepsin, rennin and free hydrochloric acid to accomplish the transformations for which the stomach is designed. The chemical change, or normal fermentation, started in the mouth, continues unchecked in the first part of the stomach. As the current of food passes along the walls of the stomach the alkalinity is changed and the chyle becomes acid, owing to the mixture of the free hydrochloric acid. In the presence of free hydrochloric acid, the pepsin changes proteids into peptones. The cells lining the walls of the stomach have the power of secreting a juice to properly change the food which lies in contact with them. From time to time, the pyloric sphincter, or valve, opens and permits food that is in a proper state of digestion to pass through into the small intestine, where it is acted upon by secretions of the pancreas.

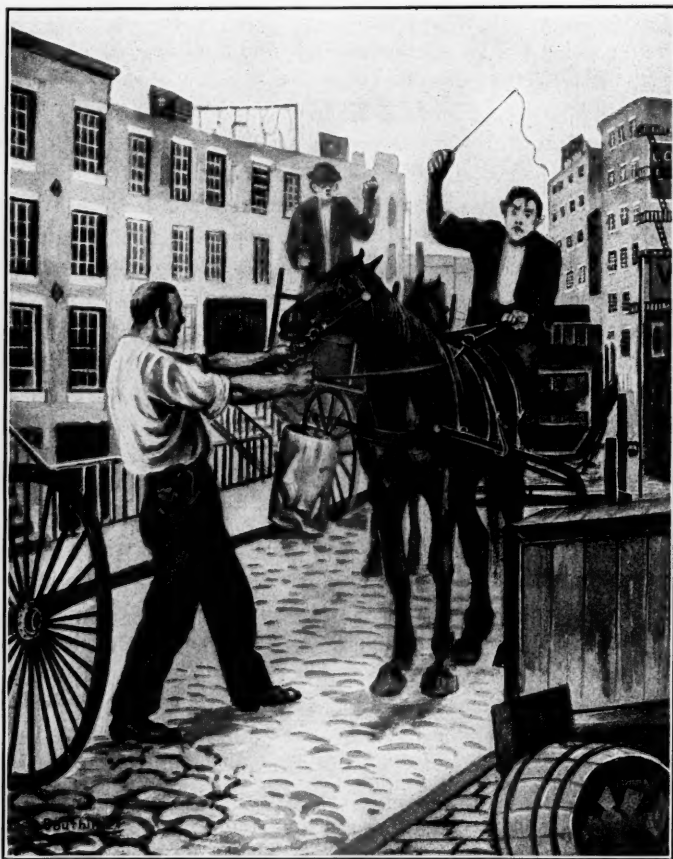
The following are the changes accomplished by the gastric juice, and the churning, washing, twisting, squeezing motions of the stomach—liquefaction of the food; a slight emulsification of the fats; a limited action on starch and sugar; coagulating action on milk, and the peptonization of albuminous food elements.

When the requirements of normal digestion are not complied with, when there is too great a quantity of food, or too much fat, or fermented, unmasticated or indigestible food, acute inflammation of the membrane lining the stomach supervenes. The same results may attend too great a dilution of the gastric juice, or too little chewing to furnish the physical stimulus necessary to the secretion of gastric juice.

The inflamed stomach simply "throws up the game." It refuses to play or be played with. Like a balky horse in a crowded street, it refuses to work or to let by any honest horse with a load.

Too much food induces stagnation, and stagnation is the spark which explodes a whole chain of evils. An overloaded stomach cannot contract and expand. It cannot perform those churning movements which not only affect the food but stimulate the secreting cells. The hydrochloric acid, whose antiseptic and anti-putrefactive properties are invaluable to

proper digestion, is not properly secreted and fermentation of the food takes place with the formation of gases and lactic, butyric and acetic acids. The microorganisms that were taken in with the food multiply and produce ptomaine and other poisons. This putrefying, germ-laden,



"The Inflamed Stomach, like a Balking Horse in a Crowded Street, Refuses to Work or to Let
By any Honest Horse with a Load."

poisonous, disintegrating mass holds up traffic until it has been gotten rid of, either via the small intestine or the œsophagus. The number of cases of acute indigestion which terminate fatally, emphasizes, as nothing else could, the danger to the organism which such a mass of food constitutes.

The longer food is chewed, the less is eaten. When the teeth are in

perfect condition and the food is properly chewed, the person comes gradually to the realization that the stomach has enough. But when the teeth are decayed, or missing, or ill-arranged, so that food is improperly chewed, the individual comes suddenly to the realization that the stomach has too much, and the unmaasticated food is more than likely to irritate the mucous membrane of the stomach.

No dentist can afford to overlook the influence of mastication on the secretion of the digestive juices. Chewing of the food is a necessary stimulus to the secretion of these juices. And, as has been noted, the presence of natural or artificial teeth, in healthy condition and proper relation, is essential to sufficient chewing. If the secretion of the digestive juices is not stimulated by proper mastication, there will not be sufficient quantity of these juices to act upon the food. There will not be sufficient hydrochloric acid to restrain putrefactive and bacterial activity. The food may irritate the stomach by its bulk and hardness and retard the churning action. The valve to the intestines will open less often, and stagnation will ensue. And stagnation is stagnation, from whatever cause it may arise. No one who has helped care for a severe case of indigestion will wish to suffer its agonies, or to permit his patient to suffer them.

It is not possible to hold the condition of the teeth responsible for the eating of an excessive amount of fat or indigestible food, or drinking too much water, wine or whisky. But if the teeth are sound and properly fill the dental arch, the indigestible fatty foods will be more thoroughly chewed, and relatively less will be eaten. The more thoroughly it is chewed, the less temptation there will be to sweep a raft of food from its moorings with a freshet of beer, ale or porter.

The functions of the stomach may be undermined by another process. The hydrochloric acid is able to overcome the normal bacterial invasion accompanying the taking of food. But the constant ingestion of pyogenic material from a septic mouth interferes with and may prevent the normal secretion of hydrochloric acid.

This invasion occurs in those resting periods of the stomach, when hydrochloric acid is not being secreted. The constant attacks of fresh armies of microorganisms break down the normal resistance of the stomach and finally infect the lining membrane. Food taken into a stomach thus infected excites a further inflammation because the hydrochloric acid is not secreted, the churning action of the stomach is retarded, and stagnation and putrefaction result.

Unclean gums and teeth, either natural or artificial, form the chief recruiting station for the armies of microorganisms which attack the stomach. Pus and putrid food are dislodged from their hiding-places

and swallowed. Like Tennyson's brook, this source of infection "goes on forever."

The establishment of correct occlusion by sound or well-repaired teeth, the scaling and polishing of teeth, the obliteration of pus pockets and the replacing of missing teeth by hygienically correct substitutes will cure many cases of gastritis which no other method of treatment can cure.

For the further study of this subject the following works will be found valuable.

- "Disease of the Stomach," Hammerter.
- "Disease of the Stomach," Einhorn.
- "Food and Dietetics," Hutchison.
- "Physiological and Pathological Chemistry," Bunge.
- "Chemical Pathology," Wells.
- "Text Book of Pathology," Delafield and Prudden.
- "Principles of Pathology" (General), Adami.
- "Principles of Pathology" (Systemic), Adami and Nicholas.
- "Practice of Medicine," Kelly.
- "Practice of Medicine," Hare.
- "Practice of Medicine," Osler.

1 WEST 34TH STREET.

TWO COMMENTS ON "WAS THIS BABY BORN WITH A FILLING?"*

DR. L. L. ZARBAUGH,
TOLEDO, OHIO.

DEAR DOCTOR:

Regarding the very unusual case presented to the readers of THE DENTAL DIGEST of the July issue, with which your name is prominently connected, I wish to say that in the first place it is wisest to assume that the possibility of a child being born into the world, so equipped by Nature as to automatically supply metallic fillings for its own teeth as may be required, is impossible, or even unthinkable. But while we know well that Nature plays some curious pranks, especially along the lines of maternal impression, etc., we are hardly prepared to follow this problem through the various channels necessarily involved in such an intricate process. We are, however, well aware that Nature often endows a child, through parental influences, with faculties which enable him to fill his *pockets* with silver and gold, and later possibly

* July Dental Digest, p. 378.

his teeth, by the aid of a dentist, but I am sure it is never done in the manner suggested.

My reason for taking notice of this communication is to relate the history of a peculiar case that came under my observation not long ago, in which there is sufficient similarity to possibly throw some light upon the case in question.

A lady brought her little girl (three years of age) to my office recently, saying that the child had been complaining a great deal of tooth-ache, and that there being a cavity in one of the lower molars, she wished me to treat the case and fill the tooth if I thought best. Upon examination, I found no cavity, but did find a molar that had apparently been filled. I reported to the mother the result of my examination, and added that as the tooth that had been filled seemed to be quite sensitive, it was my opinion that the trouble was there. She exclaimed: "Why, doctor, this child has no teeth filled, she was never to a dentist before." I showed her the tooth, having what appeared to be a nice smooth, solid filling. She was dumfounded, and could hardly find words to express her surprise. Knowing her to be a truthful woman, well-to-do and in prosperous circumstances, with no object to serve in trying to deceive me, I looked at the filling more closely. It appeared to be a perfect filling. After learning that the child had never been from under its mother's care hardly an hour since she was born, the possibility of the child having been taken to a dentist by a nurse, or some other member of the family unknown to the mother, was eliminated. I was then convinced that the filling was in some way accidental and unpremeditated, and set to work to solve the mystery. Finding that I could not remove it with an exploring instrument, or an excavator, I took a No. 3 rose head bur and began to drill the tooth cautiously, and soon removed the filling. I found it to be composed of very thin tin foil, such as is often wrapped around certain kinds of candy. This had in some way found its way into the cavity, which being cup-shaped, retained it where it was very firmly and smoothly pressed into the cavity by the action of the occluding tooth—as perfectly as if done with an electric plugger. It presented every appearance of a well-filled tooth.

Having had this experience, I cannot help but think that the case under discussion might have been caused in some such way. Moreover, I might add, that notwithstanding the fact that the mother of the child had a tooth filled eight months before the birth of the child, the tooth in which the filling has been so mysteriously placed, has no counterpart in the teeth of an adult; thus the direct line of maternal impression would be broken, and the theory of maternal reproduction would lose its force. I think we can definitely dispose of the idea that it is

possible for maternal impressions to produce metallic filling; if otherwise, why cannot we expect to ultimately receive all the commodities for our daily existence from this same source?

Very doubtfully yours,

S. S. HESS, D.D.S.

FREELAND, PA., July 25, 1912.

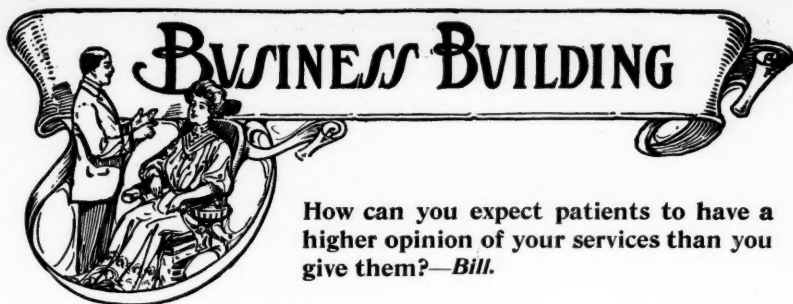
GEORGE WOOD CLAPP, D.D.S.,
New York City, N. Y.

DEAR DOCTOR:

I have just received the July number of your valuable journal, and was much entertained by the article in regard to the tooth that Nature seems to have filled. It has prompted me to write these few lines to you. My brother lives at the old home in Belle Plaine, Kansas, and while there on a visit three years ago, he asked me to take his little girl (four years old) to the dentist and have two of her teeth filled. I took her to Dr. E.'s office, and upon examining the mouth we found a cavity in each of the lower second premolars, and a "filling" in the first lower molar on the left side. I asked her who put in the filling for her. Her answer was that she had no fillings. I took a second look at it and upon scratching it, it proved to be metal, as it brightened under an explorer. I questioned her from every angle and she firmly declared she had never visited a dentist until that day. Dr. E. and I became much interested in the "freak" by this time and called her father to come over to the office. He confirmed the child's statement. Then we called the mother, who is supposed to know all things, and she was as much at a loss to explain the presence of the filling as we were. We thought it possible that it was filled while on a visit to her grandmother, but the little girl said: "No, sir; I never had a tooth filled." The grandmother also denied having had the tooth filled. I thought no more of the matter until I received the July DIGEST. Whether the mother had any teeth filled a few months prior to the birth of the child I do not know. Dr. E., who is now located at Belle Plaine, and who was a classmate of mine during our school days at the Western Dental College at Kansas City, will no doubt call this to mind upon reading the July number of your journal.

JOHN W. FORNEY.

OSCEOLA, IA., July 13, 1912.



How can you expect patients to have a higher opinion of your services than you give them?—Bill.

SERVICE SELLING TALKS

NUMBER SEVEN

By W. F. DAVIS, D.M.D., NEW YORK CITY

One of the greatest mistakes a dentist can make is to cut prices. Make one price, a fair price, and do not change it. You may lose a patient once in a while, but in the end you will gain. Patients who are looking for cheap work are not the kind you want. If they leave your office for a cheaper man's office, the chances are even that the cheap work will be unsatisfactory and that they will come back to you. People have more respect for the one-price man than they have for the any-old-price man.—AUTHOR.

"Good morning, sir." "Yes, I am the dentist." "Can I do all kinds of dentistry?" "I don't know exactly what you mean by 'all kinds of dentistry,' but I am going to say Yes. What kind do you want?"

"Well, you see, doctor, I had all my teeth out about two years ago. A young fellow opened a shop up at the Centre one summer and he advertised such low prices that I thought it was a good time to have my teeth pulled. So I had them all out. I paid him \$5, and he said he'd put me in a full set, upper and lower, for \$11 more. He said they would be first-class teeth with patent fasteners, that would hold 'em up so that I could eat anything. He was a pretty slick fellow, all right, and I guess he fooled a lot of folks up to the Centre into having their teeth out and paying him something in advance for new ones. He said he could make teeth that would be better than the natural teeth. He pulled lots of teeth and he made quite a lot of artificial teeth, and then all of a sudden he was missing. He owed most everybody, and the teeth he made for folks were of no use whatever. Now, I've come around to see if you will help me out. I s'pose you wouldn't be willing to make me the two sets for \$11, just what he promised to do it for?"

"You are perfectly correct in your supposition. I certainly would

not make them for \$11. You do not see why I won't make them just as cheap as the other man would? Let me tell you. By the way, aren't you the farmer who lives in the big white house on the Centreville road, where there are two barns on the other side of the road from the house? I thought so. Haven't I seen you driving a big bay colt, a fine stepper and a good looker? Well, he's a good colt, all right. I suppose you wouldn't take \$25 for him, would you? No? I don't see why you won't. Bill Gibbs offered to sell me a horse for \$25 the other day, and it was a bigger horse than yours."

"Say, now, doctor, you must be joking. You know Bill Gibbs is a regular horse jockey and he never has a real horse to sell. My colt is four years old, right out of the best Hambletonian stock. He weighs 1,150 pounds, is sound and kind, and is just as pretty as a picture. Besides, he's got lots of speed. Why, he's worth every cent of \$300. You wouldn't compare a colt like that with one of Bill Gibbs's horses."

"Well, I don't know. Bill Gibbs has a horse and you have a horse. Bill Gibbs offers his horse for \$25. You want more than ten times as much for your horse. What makes such a difference? Oh, I see. Your horse is 'ten times as good as Bill Gibbs's horse.' Then all horses are not worth the same?"

"Of course they are not worth just the same, doctor. If you should buy Bill Gibbs's horse you'd always be sorry. It's a horse, to be sure, but what good is it? You'd always be ashamed of its looks, and such a horse couldn't travel as fast as a man could walk. And he couldn't work. Now, what use would such a horse be, at any price?"

"My dear sir, this man who left the Centre so suddenly offered to make you two dental plates for \$11. If I make them for you I shall charge you \$40. You do not understand the difference in prices? You say the price ought to be the same because, in either case, 'it's only two sets of teeth, anyway.' That's why I asked you about horses. When I tell you that a horse is only a horse and that one horse is just as good as another, you think I must be losing my mind. You say there's a wonderful difference in the real value of horses. And you are right. I say there is a wonderful difference in artificial dentures. And I am right. This cheap man would make you a cheap set of teeth, just as Bill Gibbs would sell me a cheap horse. The cheap set of teeth would look cheap and you would be ashamed of them, just as I would be ashamed of that cheap horse. Then again the cheap teeth would be of no value to eat with, any more than that cheap horse would be of value as a road horse or a work horse.

"Do you see the point I am trying to make? I want you to see that there are different classes of dental work, just as there are different classes of horses. You would be ashamed to own or sell a cheap horse; I would be ashamed to make a cheap set of teeth. I don't like to make artificial dentures, because I always think the teeth might have been saved instead of extracted. When I do make a set of teeth, I use my utmost skill to make a substitute that shall as nearly as possible take the place of the natural teeth."

"What makes these teeth cost so much, doctor? Forty dollars is a lot of money. Some men would work a whole month for that money. I don't suppose it takes you more'n a week to make them."

"No, Mr.— What did you say your name is? Van Dorn. That's a good old Dutch name. What I was going to say, Mr. Van Dorn, is that I probably should not work a week making your teeth. There's something more than actual manual labor connected with making artificial dentures. If I charged you only for the actual time I spent on these sets of teeth your bill would be very much less. The rest of my charge is for 'the know how.' That 'know how' cost me years of hard study and hundreds of dollars. It represents the difference between indifferent, ignorant experiment, and careful, intelligent, skilled effort. In the one case the chances are that your money is thrown away. In the other you are pretty nearly sure of getting something satisfactory, something you can use, nearly, if not quite, as well as your own teeth.

"If you made some teeth for me, would you guarantee them for ten years? That other dentist said he would."

"Let me ask you a question before I answer yours. That four-year-old colt of yours is perfectly sound and kind, isn't he? And you would sell him to-day with an iron-clad guarantee? Of course you would. But would you guarantee him to remain sound and kind for ten years, or five years, or even six months? If you are an honest man, you would not. About giving a guarantee on your teeth. This is my guarantee: I will take great care in making the plates and I will use good material. From an examination of your mouth I should say good results could be promised. I fully believe I can make you sets of teeth that will look well and will be of practical value, that is, teeth that you can eat with. But I would not guarantee them any longer than you will guarantee the soundness of your colt. If they should break or fail through any manifest fault of the material or workmanship, of course, I would make good. In any case I would give you a square deal. No honest man can give any stronger guarantee about anything so uncertain."

"Well, you see, doctor, one reason I came to you was because Tom Anderson recommended you. You remember some work you did for the boy, Sam, straightening his teeth and such like. You certainly did improve the boy's looks, and they say he's a good deal brighter since. Anyhow, Tom thinks you're pretty smart. He says you are an awful crank, but that you are honest and know your business. Seems to me,



"Yes, he is a perfectly sound horse now. But I can't guarantee him to stay sound 48 hours. Nobody knows what may happen."

though, that paying out \$40 ought to give anybody a five or ten years' guarantee."

"I could give you a five years' guarantee and the chances are that the teeth would be entirely satisfactory and that I would not be called on to do anything to them, but that isn't my way of doing business. I won't lie to my patients or promise them anything unreasonable. I'd rather be 'an awful crank' than a persistent liar."

"I guess you are something of a crank, according to the popular idea, but I think I begin to see this matter from your point of view. I suppose I'd better pay what you ask and get some honest work. I'd rather have you talk as you do than have you so anxious for my money that you are willing to make all kinds of promises to get the job. There's another reason why I'm going to have you do the work for me. You know old Job Perkins up on the hill? Well, he got one of those cheap sets of teeth and it is always dropping down and rattling around when Job is talking. I don't want that kind, so I'm going to pay more."

"I'll do my best, Mr. Van Dorn, to make you some artificial teeth that you will not be ashamed of, and, what is yet more desirable, some that will be of real use. I am quite sure that I can do so. I have an honest desire to give you satisfaction, not alone for the money you pay me, but because every satisfied patient is an advertisement that brings me more patients, while every dissatisfied patient is just the opposite kind of an advertisement."

"Well, I'm a pretty good advertising medium. When I like anything I'm very likely to tell people about it, and when I think I've been buncoed, you can just bet I holler. I can't stop any longer to-day, but I'll be in the first of next week, ready for you to begin work."

(Service Selling Talk, Number Eight, is expected to be published in the November issue.)

COMMENT AND CORRECTION

Editor DENTAL DIGEST:

IN the August number of the DENTAL DIGEST, under the title of "What would you do with this Child?" signed F. R. M., there is a sentence which reads as follows: "I told him I could make a fourteen-tooth bridge for twenty-five dollars and he nearly fainted, but asked how much for a full upper plate." I would like to know whether or not that twenty-five dollars is a misprint? If it is not a misprint the writer would like to know if anybody can construct a fourteen-tooth bridge for twenty-five dollars?—G. H. S.

In the August DENTAL DIGEST, page 452, "F. R. M." is credited with the assertion that he "could make a 14-tooth bridge for \$25."

This price is incorrect, it should read "for \$125."

GETTING RIGHT DOWN TO BRASS TACKS ON THE SUBJECT OF DENTAL BUSINESS *

BY GEORGE WOOD CLAPP, D.D.S., NEW YORK.

Continued from the August number.

PART TWO.

GETTING A LIVING OUT OF DENTISTRY.

And now, having said all those things about the professional side of practice which even the most exacting of you could wish, I want to discuss the practical considerations of life as you and I live it from every weekday morning to the weekday night. In other words, I want to discuss the matter of getting a living out of dentistry. And I want you to forget for the moment all the other considerations which crowd upon your mind and be with me just what I am, a man trying to earn an honorable living for himself and his family in ways which leave the world a little better.

And I shall begin by a frank confession which I am sure is just as true of each of you as of myself. It has to do with why we entered dentistry. I did not enter on the practice of dentistry to extract teeth, or fill them or treat abscesses or to do any other dental operation as the end and aim of my work. I entered on the practice of dentistry to make a living. That question of getting bread and butter and a roof and some of the luxuries of life was the driving force. Grim necessity made some line of profit-bringing activity necessary, and I chose dentistry from among the multitude of ways because I thought I should like it best.

If you don't want to be perfectly honest about this matter, you'd better be careful how you admit that you did likewise, for it makes an enormous difference whether the practice of good dentistry is to you a means of earning a good living, or whether the dentistry itself, the working for others, the performing of fine operations, and all that goes with it, was the end and aim of your life, with the earning of a living merely secondary. But I think most of you felt as I did, that through proper activities in dentistry we could make excellent livings. And we took it up with that end in view.

In course of time we went to dental college. Here we were given the professional part of our education.

In college we learned a good many other things. We were told how dentistry was once a trade and was practised by untrained men

* Address given at the forty-ninth annual meeting of the Susquehanna Dental Association of Pennsylvania, at Wilkes-Barre, Pa., May, 1912.

who did the crudest of operations in the crudest of ways. We learned about the days of professional jealousy, when every dentist was suspicious of every other, and hoarded up for his own exclusive use whatever knowledge he acquired. We have learned how the broader-minded pioneers got these narrow-minded, suspicious dentists together in societies and inaugurated that era of communion which has been so enormously fruitful of good to us all.

We were told also how some of the dentists of those days refused to be joined to this broader-minded movement and how the broader-minded ones, in the efforts to establish the nobler status, drew up a Code of Ethics as the touchstone by which all good dentists and true shall be judged. And from that day to this, the line of demarcation between those who are doing what they believe will build up the profession and those who seek to build themselves at the expense of the profession, has grown sharper.

Those of us who have come into the profession since the days when these great deeds were wrought can have no just estimate of the wisdom and virtue of the men who did these things or of the conditions under which they were done. And we can say only that they did great things, and that in the main they builded well.

If you have ever watched the pendulum of the clock, you know that when swinging from one extreme of its path it never stops just in the center, at the point of balance, but swings on to the other extreme. And we seem to be now at the other extreme of movement from the days when the practice of dentistry was a mere trade.

And so you and I, as students, heard a great deal about ethics, about our duties to the patient and to our fellow practitioner, and very little about our duties to ourselves and those dependent on us, until we partly forgot that for which we entered on the practice of dentistry—the getting of a living—and the quality of the operation and the Code of Ethics became ends in themselves.

You were a most fortunate student if, in college, you learned anything which fitted you to face the problems which were to confront you first when you emerged from school, diploma in hand. Nobody told you how to select a city or town and a location in that place, how to fit and furnish an office, how to develop the first faint opportunities that presented for the building of a practice, how to tell what a thing cost you, how to establish a credit and live up to it, how to get into touch with the people of your community, how to do the other necessary things which precede the exercise of your professional education. The result was that you found yourself suddenly face to face with a line of problems which you had not been fitted to solve intelligently. And

they demanded immediate and intelligent answers. They were all the questions that group around the title of this half of this paper—the getting of a living out of dentistry.

It will be contended by those who uphold the methods of teaching in vogue in the colleges, that you answered these questions or you would not still be in practice. But I want to appeal to that knowledge which is secret with each of you, whether you answered them easily and well, whether they did not cost you more to answer than there was any necessity of, whether they could have been much better answered if you had been given even a little training to meet them. You know how you starved and pinched and denied yourself in order that you might hold true to the things you had been taught. I know I did, and most of you probably did likewise. You know that some of your schoolmates tired of the starving and waiting, and adopted lines of activity in which they sought to build themselves up at the expense of their profession and fellow practitioners. And if I could get at the actual facts in your cases I could probably show that most of you only half answered these first important questions and that you are not really succeeding, but that you are rather hanging on by the grace of what partial truth was in your answers, than succeeding in full because you answered the questions fully and well.

You must not take offense if, for the purpose of this paper, I regard you as the average dentist, and treat you according to what figures I have been able to get. These figures are not as extensive as I wish they were. But I have stretched them on the favorable side, that they may not shock you too much. And I want to say to you that in the light of these figures the average American dentist is not succeeding in that for which he entered on the practice of dentistry—the getting of a living out of his practice.

Opinions differ as to what constitutes “a living,” and some of you may say that the average dentist is succeeding because he gets three meals daily and a place to sleep, where my own definition of a living would pronounce him unsuccessful. So, to be perfectly fair, we must clear up our terms a little.

I do not mean by “getting a living” merely getting enough cheap food to keep body and soul together during the period that my working power is sufficient to earn it. I have a mind as well as a body, and that mind gets hungry just as the body does, and requires to be fed with books, pictures, music, travel, and enough leisure to occasionally rest and invite my soul. In other words, I want my living to include those things which other people of the same intelligence enjoy in moderation. You will say at once that is a pretty loose definition, that it opens up

the door to all kinds of extravagances and expenses which the dentist must include in his living and for which he must earn money. That is true in a sense, and it has been responsible for the fall of many a dentist who passed from days of poverty to days of plenty, and could not hold himself in check. But it need not be responsible for the failure of any man of sufficient strength of character to control himself. And I propose to show you that the earnings of the average dentist do not provide for any of these which you may call luxuries, to any appreciable extent.

One other thing must be included in the dentist's scheme before he can be called successful. Not only must he provide the necessities and a reasonable proportion of luxuries during the years when his earning power is great, but he must so order his affairs that enough money shall be laid aside to carry him through the years when he can earn little or nothing. In other words, a dentist's life is not ended until he is laid away for his last rest, and he must take reckoning of this fact during the years of his productiveness.

Some years ago I sent out inquiries to readers of *THE DENTAL DIGEST* asking them to give me the net receipts of their practices, the costs of conducting them, and the amounts they had been able to lay away in cash or its equivalent for each of the two preceding years. The replies indicated that if we leave out of consideration practices of \$8,000 gross and over, the average dentist earns, gross, \$2,600 per year. The cost of conducting the practice is about \$1,200. And the sum of \$1,400, including uncollected bills, was available for the dentist's living. The amounts saved in cash averaged less than \$100 per dentist.

Let us assume that you are an average dentist and stretch the total income of the practice from \$2,600 to \$3,000, and see where you stand. As nearly as I can determine, the average dentist is about thirty-eight years old. He graduated from the college at the age of twenty-five, and has been thirteen years in practice. He has a wife and two children, and the family must not only get its shelter, food and drink, education and luxuries from that \$3,000, but the insurance to protect the wife and children, together with any provision which is to be made for old age must also come from the earnings; for it is too bad to make provision for death only, and not for life also.

At first glance it might not seem so difficult to support four people on \$3,000 annually, and provide for the future as well. But on closer examination the real difficulty of the problem is seen. For not all of that \$3,000 is available for such support. The expenses of the business must be paid out of \$3,000 as well as the family expenses.

As nearly as I can get at costs of conducting the average practice, they run about as follows:

Rent, at \$20 per month	\$240
Light, heat, phone, at \$5	60
Laundry, at \$5	60
Office girl	300
Supplies, at \$20 per month	240
Precious metals, at \$20 per month	240
Magazines, books, meetings, miscellaneous	60
	<hr/>
	\$1,200

Now if that column of figures told the whole story it would not be so bad, but rightly seen it does not, nor anything like it. For if we are to figure our costs on the only basis that is accepted among other business men as satisfactory we have not yet reached the end of our expenses. You spent three years in college. You invested not only the money paid out for your instruction, but the time you spent there. And these two items form part of your expense. For your business should be so conducted that when you leave or lose the practice you shall get that investment back, that it shall not be forever lost to you. That not only requires a little intelligent bookkeeping on your part, but it requires some self-sacrifice to carry it through. Let us look at the figures.

Three years in college, cost	\$1,200
Three years' time, worth	1,500
Furnishings and equipment	800
	<hr/>
	\$3,500

So that the day you received your diploma, before you even settled where you should locate or bought your outfit, you had invested in your education the sum of \$2,700. And when you were ready to receive patients you doubtless had about \$800 added to it for your outfit. So your final investment was \$3,500.

Now, if you want to put this sum of money into the business and bid it good-by, you have a perfect right to do so, but it is not good business. Your business is that much in debt to you, and it should make some arrangements for paying that debt off, a little at a time, so that before old age or death winds the business up it shall be free and clear, and you shall have the money back. You should plan therefore to have the business pay you at least 5 per cent. of this sum back annually, thus taking twenty years to pay it all off. And you should arrange to put these annual payments into the bank as a saving fund or in good interest-bringing investments of stable character, so that at the end of your practice you may stand free and clear with a little interest on the deposits for good measure. This will be a tiny nest egg for old age.

The interest on your \$3,500 investment, at 5 per cent., is \$175 a

year and you should be able to take that much out of the practice and put it safely away.

The investment will not wear out, but the equipment will, and you must provide for its maintenance without drawing on the running expenses of the business. Ten per cent. per annum, or the sum of \$80 per year, is not a cent too much to provide for this purpose. If that keeps your office up to date you will be very fortunate. The annual payments of the business on its indebtedness and on the upkeep of the equipment then will be \$255 annually.

One other item loomed large in the figures which I received from dentists, namely, "Uncollected Accounts" many of them some years old and to the eyes of an outsider probably worthless. These averaged more than \$100 per dentist. Here I have put them at \$50.

Our table as so far completed, then reads as follows:

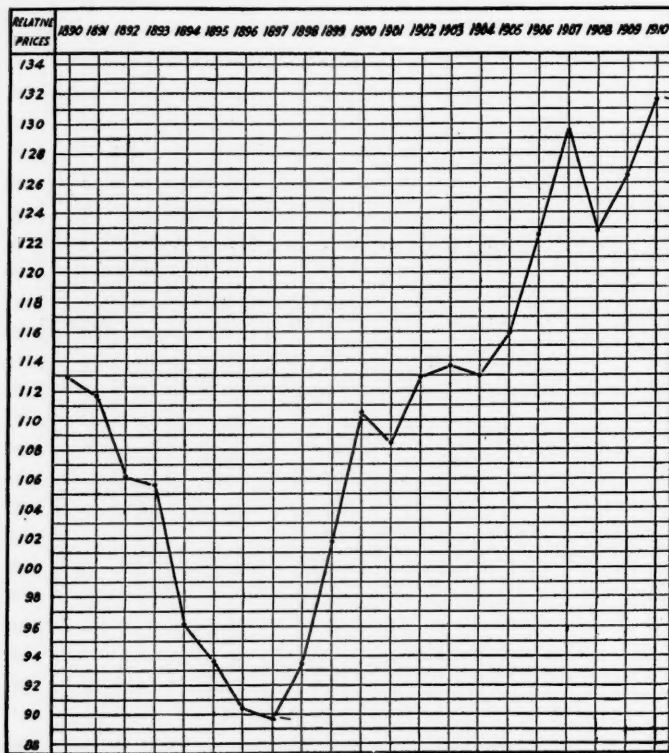
Annual running expense	\$1,200
Refunding initial debt	255
Depreciation	80
	<hr/>
	\$1,535

Out of the total income of \$3,000 to which we stretched the earnings of the average dentist, half is gone for expenses which cannot rightly be avoided. Some of them are being avoided by nearly all of us now, but they cannot be avoided in the final reckoning. For if you do not take out of your annual earnings enough to repay to you the original investment in the business, you will simply be short that much all your life. You may take it out of the business now, a little at a time, and have it for your support in old age, or you may regard it as lost now, as it certainly will be then. Whichever way you look at it you've got to pay the bill. And because business firms realize this, and find the way of small annual payments easier and more pleasant, that way has come to be regarded as standard.

Here, then, we have \$1,500 as the maximum sum on which four people are to live in the present and make some provision for old age. How well you can do that depends largely on where you live and how you live. But some items are pretty generally regarded as fixed. One is that the first duty of a husband and father is to make some provision for the protection of his wife and children if he dies before they have been fitted to care for themselves. The commonest way of doing this, and doubtless the best for those of us of limited means, is through life insurance. And for a family including a mother and two growing children a policy of \$5,000 is not a dollar too much.

If you take out a straight life policy at the age of thirty-five years

in a good company, for the sum of \$5,000, you will pay \$132.50 annually premium. If you take out a policy which you can pay up entirely in twenty years for the same amount, you will pay \$166.40 annually. Personally, I prefer the policy that I can pay out while I have my health and vigor. Then at the age of fifty-five I am done paying, and that provision is put away without further effort on my part. If you accept this view, there remains \$1,328.60 on which to live and save whatever you can.



WHOLESALE PRICES, 1890 TO 1910.

Relative Prices of all Commodities, 1890 to 1910—[Average for 1890 to 1899 = 100.0.]

This table shows that the average wholesale prices declined each year from 1890 to 1897, or eight years of constantly falling prices. From 1898 to 1910 has been a period of advancing prices, with only three of the thirteen years showing a decrease from the prices of the previous year. These three years were 1901, 1904, and 1908; the decline of the 1908 prices from those of 1907 being heavier than the decline in either 1901 or 1904. The lowest year of the twenty-one-year period was 1897 and the highest was 1910.

I do not want to be understood as saying that a family of four cannot live on the sum of \$1,328 annually, because I have seen the days when my family lived on very much less than that. But that occurred a number of years ago, when we could buy fine chickens for 25 cents each, when butter cost us only 20 cents per pound the year round, when we paid 5 cents per quart for milk, and \$12 a month for house rent. The cost of living is not what it was ten years ago. I have here a government report on the relative prices of all commodities from 1890 to 1910, and the prices from 1901 to date represent a constantly rising prices of all the necessities.

The New World of May 14th stated editorially that the cost of living had increased 10 per cent. in one year.

These facts are of enormous importance to the man who must live on \$1,300, who must educate two children to the points where they can make good livings for themselves, and who needs to keep on hand a little money for the emergencies of illness.

And now I want to turn your attention to another phase of the results of such limited incomes on many members of our profession. I want to put that in the most striking form possible, by saying that an abnormally large proportion of the practitioners of dentistry are practically bankrupt. Whenever I make that statement somebody comes out of the distance and asks whether more of them are so than among the members of other professions. I do not think the percentage of bankrupt dentists is greater than the percentage of physicians or ministers in the same conditions. But I do not regard that as an excuse for the condition or even a satisfactory explanation.

We are all business men during the greater part of our time and have a business man's opportunities. There is no such amount of compulsion to do work regardless of the receipt of the fee as there is among physicians and ministers of the Gospel. And the fact that many physicians are wretched business men interests me in only a general way. My life work is among dentists and not among the members of other professions.

I am not able now to give you the figures as exactly as I could some years ago, because I have been too much occupied to look into the matter of late. But I was prompted to take the editorship of *THE DENTAL DIGEST* largely by one fact, that there were in 1909 in the United States 6,600 dentists who were practically bankrupt. I do not mean that they had gone through court proceedings and been declared legally bankrupt, but they were known to be unable to pay bills to the amount of five dollars, and it was a matter of common knowledge that if you sold them five dollars' worth of goods you were likely never to get the

money. Now when a man cannot in sixty days pay an honest debt of five dollars for materials with which he earns his living, I think him practically bankrupt, whether the court has declared him so or not.

In 1909 there were approximately 35,000 dentists in active practice in the United States, and one man in every five of them was in this condition. That is a terrible condition of affairs. To think that so many members of our profession, men who have given time for college educations, who have been graduated with diplomas, who are seeking to render services of the greatest value to the public, should be financially down and out, shocked me more than I can tell you. And I resolved then and there to take up the battle in behalf of these men, and to do my little best to help them to see how unnecessary are such conditions. I am amply paid in the fact that the profession is awakening to the importance of the business side of practice, and that in spite of the opposition of dentists holding ultra-conservative ethical views, hundreds of members of our profession are in better average financial condition to-day than ever before.

I learned other things quite as shocking as the one great fact just mentioned. I found that a surprising number of our greatest men have been buried from the almshouse, or saved from it by the charity of their fellow workers. That is a terrible ending to a brilliant career, to be buried in a charity coffin and to rest in a charity grave, all as the result of business mismanagement.

I found that when dentists bought furniture for their offices, three out of four of them were compelled to pay ten dollars down and ten dollars a month, and that more than half of these men were at some time behind in even these payments.

I found also that only about 1 per cent. of the dentists in practice then made it a rule to keep \$100 on deposit with their depots and take the profits, and a considerable proportion of these were advertising dentists. Few paid promptly and took a 2 per cent. discount.

And I knew that all these things were unnecessary. I will not stop to tell how I proved that 98 per cent. of these bankrupt dentists were honest, but I did. But I wanted to tell the members of my own profession how unnecessary all this poverty and self-denial is. I wanted to tell them of the abundance of work within arms' reach waiting to be done, of the facts that for at least a great proportion of it profitable fees could be obtained, if rightly attempted; of how a dentist could determine what fees are profitable; of how he could use his money to advantage, and face old age with the assurance of at least comfort.

I'll try to tell you a little of this in the last and most important part of this paper.

THE SCIENCE OF BUILDING ANY BUSINESS*

BY A. F. SHELDON, Chicago, Ill.

I AM to have the honor of addressing you to-night on the subject, "The Science of Building Any Business."

Let us begin our consideration of this theme by an analysis of the various words used in its title. And, first of all, what is science? In the words of Herbert Spencer, science is organized knowledge. A very practical American has defined it as classified common sense. Science requires two things. First, accurate knowledge, in the form of tested truth, and second, organization of that knowledge.

There was a time when there was no science of astronomy, just a mass of confused facts about the heavenly bodies known as astrology. Finally, that knowledge became organized or classified, and the science of astronomy was born.

There was a time when there was no science of agriculture. Indeed it was not so very long ago when farmers laughed at the idea of the scientific agricultural student. They no longer laugh. The science of agriculture in the form of organized and accurate knowledge is recognized to-day throughout the world, and it is making two ears of corn grow where one grew before.

We are living in an age of science.

That there is much knowledge in the world pertaining to the how of building any business to greater and more profitable proportions goes without saying. If Herbert Spencer's definition is correct, namely that it is organized knowledge, and if we can organize that knowledge, then we will have a science. We will have organized knowledge pertaining to the how of building any business, a science which we may name "The Science of Business Building."

Let us next define the term "Business Building."

Business building is the art of procuring permanent and profitable patronage. To do this involves the necessity of the possession of the power to make permanent and profitable patrons. Right here I would challenge your attention to the fact that success in life commercially hinges right there. It hinges upon the *power to secure permanent and profitable patronage*. This is true no matter what line of business or busy-ness one is engaged in.

Everyone engaged in useful effort has a patron or patrons.

In other words, everyone has something to dispose of, something to sell.

*Lecture before the St. Louis Society of Dental Science, March 2, 1911.

The employee is selling his services; the employer is his patron. The lawyer is selling his services to his client. The physician or dentist is selling his services to his patient. The people who patronize the retail store are the patrons of the merchant. The merchants who run the store are the patrons of the jobbers and manufacturers and wholesalers. The manufacturers are the patrons of those who sell the raw material, and so it goes all along the line of life.

The average bookkeeper at first thought would say that he has nothing to sell, that he has no patron, but he is selling his services to his employer.

Until very recently I have had some men digging ditches on my farm. They, too, were selling something. They were selling their services to me, delivering them on the installment plan, and being paid each week for the services rendered. One of them delivered his services for a little while, and then I did not want any more of that kind of service. It was not satisfactory in either quantity or quality.

It is a law of economics that the price obtained for services is materially affected ultimately by the *quantity* and the *quality* rendered. It will be a blessed old day in both the professional and business worlds when men realize this.

And so, then, everybody has a patron or patrons, and no commercial house or professional man questions the basic truth that success depends upon the number of permanent and profitable patrons secured.

Let us now pass to a brief consideration of the concept "Profitable," for business building is the power to make permanent and profitable patrons.

I know a great many professional men to whose business there is no more system than there is to a dog fight. They never know exactly where they stand as to profits because they never know exactly what it has cost them to run their offices.

All of us have heard the complaint of the professional man that he was working very hard year after year, paying strict attention to business and all that, but did not seem to be able to take any money out of the business. In other words, he could not realize any cash profit. When you meet such a man—if he is a dentist—ask him what kind of dental work he is doing most extensively. He will likely mention a certain class of filling for which he is charging \$4.50. Ask him then how much profit he thinks he is making. In most cases he will reply "My material costs me \$2, so I am clearing \$2.50." Now, is he clearing this profit? Many professional men if they will give the matter careful investigation will find that the "\$2.50" they think they

clear is likely to be reduced to 50 cents, or in some cases they are actually losing money.

No man will ever make a financial success of his business or profession till he fully realizes and puts into practice the principle that the PROFIT is the ACTUAL MONEY CLEARED AFTER ALL EXPENSES HAVE BEEN PAID.

From these little hints as to the hows of securing profitable patronage, I would not have you think that I believe for a moment that money or profit making is the whole thing.

The prime object of human existence is the attainment of happiness, and all the money in the world will not buy happiness.

Success is the attainment and preservation of a practicable and legitimate ideal. This involves four elements. First, continuous health through which one attains a ripe old age. Second, sufficient money. Third, honor. ("The money must be honorably obtained.") And fourth, the capacity for content in a given environment.

Given these four elements and the by-product of happiness is a natural consequence. Money, therefore, is but one of four elements necessary for complete success. But sufficient money as society is organized to-day is a necessary element. Please mark the emphasis on the word "*sufficient*." But sufficient for what?

Three things are necessary for existence. The three primary necessities are *food, raiment and shelter*. As a means of really living rather than merely existing, man needs a fourth, which may be termed "accoutrements of culture," such as books, music, travel, etc. These vary according to the natural inclinations of the individual.

As society is organized to-day, and will be for a long time to come, each of these four classes of things costs money, and there are only four ways of getting money. First, the predatory method, the method of the thief and the robber; namely, to take it.

Second, the mendicant method, the method of the beggar, to beg it without giving value received.

Third, the remittance man's method, to get it from dad.

Fourth, the earner's method, the method of earning it through the rendering of service in the way of merchandise, work and so forth. Through giving value received, this is the service method. And this fourth is the only right way of getting money.

And this, the fourth way, is the way to make legitimate profit. The profit one makes is but the pay he gets for the service he renders.

Profit, then, is a necessary element in a successful commercial existence. In the absence of profit, the individual or the institution cannot continue to exist commercially. With this brief consideration

of this most important item we must pass now to a consideration of the next concept, "permanent"; for business building is the power to secure permanent and profitable patronage.

Permanency is a concept which many who are engaged in trade seem to overlook. An important phase of building a business on permanent lines is the art of making each customer a repeater, and, not only that, but making him the first link in an endless chain to bring more patrons.

It is the repeaters that count. The profits on the first transaction with any given customer are often entirely absorbed through the advertising, which found and made the customer, leading him to the original purchase. Or, again, in the expenses of the salesman who was sent to interview the patron. The profits on that patron, if any are to be made, must be made in future transactions.

In this connection I wish to say that I believe in advertising as a dynamic force in the building of a business. It is the fire under the boiler of business. The man who advertises just a little and then says that advertising does not pay reminds me of the man who burned one match under a ten-gallon kettle of water and then said that fire would not heat water.

A little fire will not heat much water, and a little advertising will not build much business. But much fire will heat much water, and much advertising of the right kind in the right mediums is, indeed, a potent factor in the building of much business. Advertising takes many forms, and one of the greatest advertisements in all the world is the wagging tongue of the satisfied patron. You cannot make the tongue of the patron wag in the absence of giving him satisfaction, and you cannot give him satisfaction in the absence of efficient service, accompanied by the little courtesies which so many overlook.

It has been well said that there are four grades of people from the view point of mental vision:

The man who looks no farther ahead than the present is mentally blind.

The one who plans for a year is a general.

The one who plans for a lifetime is a genius.

The one who plans for generations yet to be is a seer, a prophet.—

The Dental Brief.

(This article is expected to be continued in the October number.)

The hard-heartedness of some of the promoters who sell worthless mining and oil stocks can be compared only to the man who robs the house of a friend when visiting his home as a guest.—*Babson's Weekly Barometer*, July 1, 1912.

EXPERIENCES

Editor DENTAL DIGEST:

As to what percentage an associate dentist should receive when he bears none of the expense, is a little hard for one to determine, not knowing what it costs "Idaho" (July DENTAL DIGEST, p. 393) to conduct his business or the amount of net profit he receives for professional services by the hour, week or month.

If they guess at what it costs to conduct the business or what the associate dentist is worth to him, some one is going to get left.

It is my opinion that a very fair way for both parties would be as follows:

First. The associate dentist's material and bills for same should be kept separate and be deducted from his gross receipts.

Second. I think the associate dentist should pay half of the rent, telephone, power, laundry, heat, janitor, etc., and then give the senior member 10 per cent. of the balance for his good will, practice and maintenance cost on the total amount of equipment.

The associate dentist should do his own collecting or hire it done, as he understands the account better than anyone else.

He would be very liberal if he gave him a percentage on bills before they were paid. The associate dentist ought to be willing to lose the percentage on all uncollectable bills of his patients. F. U. E.

Editor DENTAL DIGEST:

I am much interested in a letter printed in the July DIGEST signed H. U. He has my hearty and sincere sympathy, chiefly because my own experience has been somewhat similar to his, though I graduated at the top of the list except two others, with whom I was equal. My professional career has been anything but an unqualified success, the cause of which I have endeavored to find out. The remedy I have not discovered, unless it is to get out and go into some other business.

Let me say in the first place that there are three facts which stand out prominently regarding success in dentistry, and by success I mean obtaining a good large practice, or, if you like, a good professional reputation. These facts are:

1. There are many dentists who do first-class, honest, conscientious work, and who have obtained an excellent extensive reputation.
2. There are many dentists who are just as good workmen, as conscientious, who have not succeeded in getting such a reputation.

3. There are poor, unskillful, dishonest dentists who put out work that is a disgrace to the profession, but who have just as good and as extensive a reputation as Nos. 1 and 2.

These are facts which ten years of experience and observation have given an abundance of proof. The conclusion I arrive at is this: If professional success does not come from superior workmanship or skill, then what does it come from?

There are three things absolutely necessary:

First. One must not be too old, at least in beginning. The dental journals have taken this up already it seems, from the evidence obtained from them that a man over 45 or 50 is not in it with the younger members of the profession. Dentistry is a boys' profession.

Second. One must be able to put up a good talk. It's the easiest thing in the world with a good talk to bluff the public as to what they should have done with their teeth. For example, note the opinion Miss J. L. M. S., in May DIGEST, had of the dentist who told her if only two germs existed they would multiply. Did you ever hear of such rot?

Third. One must be a good mixer. Good work doesn't count for much if the qualification doesn't exist.

If these three qualifications do not exist, my advice is look around for something you are better fitted for, just as H. U. is doing, and just as many other good dentists are doing after they have been a few years in practice.

J. M.


HOW TO MAKE A SUCTION CARVER.—1st. Take a curved hypo-needle, break off the point, ream out inside with a No. 1 bur, and file the outside to desired size.

2d. Take an old chip blower point and cut off small end until the stem is the size of hypo-needle, then screw the hypo-needle on it.

3d. To keep from getting hot, vulcanize a small piece of vulcanite rubber around the middle of the stem, leaving the part that enters the bulb free.

4th. Roll a small loose roll of cotton and place in butt end of chip's point, then attach to the saliva ejector on cuspidor and you will have a good suction carver. To clean it, detach from ejector, remove cotton and put in boiling water for a few minutes when all the wax will be melted out.—O. T. DEAN, D.D.S., WALLA WALLA, WASH.





PRACTICAL HINTS

[This department is in charge of Dr. V. C. Smedley, 604 California Bldg., Denver, Colo. To avoid unnecessary delay, Hints, Questions and Answers should be sent direct to him.]*

TO MAKE A VALUABLE SCRAPBOOK.—Take any old catalogue having a good cover and index it; then paste in clippings from dental journals that appeal to you. Every journal has something worth keeping; to keep all your journals for a few short articles in each is not practicable, for soon you will have an office full of them and the article you wish to refer to can't be found. Try it and you will wonder why you did not begin one before.—F. W. GROVE, D.D.S.

PRESERVING THE SHARPNESS OF BURS IN STERILIZING.—In order to preserve the sharpness of the cutting edges of burs in sterilizing, the burs should never be boiled, as boiling dulls them. If they are cleaned by simply brushing them with soap—tincture of green soap being preferred—and water, dipped in boiling water, and placed in a receptacle containing alcohol, they are sufficiently sterilized for use. Since the instruments used in delicate eye operations are sterilized in this manner, it seems that this procedure is applicable to dental burs.—A. W. BARK, D.D.S., *The Dental Cosmos*.

CASTING UNDER STEAM PRESSURE DEVELOPED IN THE VULCANIZER.—One source of pressure which is available in every dental laboratory thus far seems to have been overlooked in regard to its application to the casting process, *i. e.*, the steam pressure developed in the vulcanizer.

Any dentist who possesses a compressed-air casting outfit, by buying rubber "steam" tubing of suitable size and length, and attaching one end thereof to the escape pipe of the vulcanizer, the other end to the casting apparatus, will obtain better results from the steam pressure thus secured than from the use of compressed air.

The hot steam does not deprive the molten gold of as much heat as expanding air, and the manometer on the vulcanizer indicates the exact amount of pressure.—C. M. TORRANCE, D.D.S., FRANKFORT-ON-MAIN, GERMANY, *The Dental Cosmos*.

*In order to make this department as live, entertaining and helpful as possible, questions and answers, as well as hints of a practical nature, are solicited.

TO MAKE PORCELAIN INLAYS.—Dr. E. C. McWorter, Denver, Colo., makes porcelain inlays by fusing Jenkins porcelain into pure gold or platinum matrix over small, operating size, Bunsen burner. He builds inlay up as desired by adding a small amount of powder at a time and holding it face down, well above flame, and gradually approaching same until porcelain is fused. He also uses wet asbestos fiber for investing Richmond crowns, small bridges, repair bridges, etc., putting immediately upon fire and soldering as soon as dried out and hot enough. It is astonishing what a firm and accurate investment this makes.

A METHOD OF FILLING A CAVITY AT THE BIFURCATION OF A ROOT.—We frequently have cases where the gum has been denuded so far on the side of a tooth as to expose the roots below the bifurcation, thus allowing particles of food to work in and set up an inflammation that will eventually loosen and destroy the tooth. For this condition I have tried a remedy which gives such happy results that I have thought it well to demonstrate to others my plan. It is as follows: If there is already a cavity cut through the bifurcation then burnish a thin piece of lead with a stirrup extending out and resting on the gum, in fact, pressing into the gum with considerable force. The cavity can thus be filled with amalgam and an almost useless or loose tooth restored and made serviceable. I don't know that this is anything new, but I have never seen the operation performed by others.—GEORGE S. STAPLES, D.D.S., SHERMAN, TEXAS, *The Dental Brief*.

GLASS INSTRUMENTS AS BURNISHERS.—The greatest recent improvement in porcelain work is in using glass instruments for burnishing the foil. Take a glass rod and warm the end over the Bunsen burner. When soft, stretch it out with pliers and then melt the point into a small ball. You can shape the shank as you like, only don't make it too slight. With these perfectly smooth glass balls you can, either in the mouth or on a model, burnish the foil to perfection. Even on a sharp edge you will not tear the foil, but you can go over it again and again until every fold and wrinkle disappears. With this burnisher you can carry the foil unbroken into the deepest part of the cavity, and when it is securely packed in the ordinary manner, remove the packing, hold the foil in position by a finger on the overlap, and burnish. The light reflected from the glass is also an aid in an obscure position. The gold foil is made much stiffer by this method and peels off from the inlay with great ease. No method of stamping is to be compared with this, for you can far more easily and accurately use this method on a cement model than by stamping. I have never seen such perfect margins obtained in any other way. Dr. Weber, of Paris, introduced this method

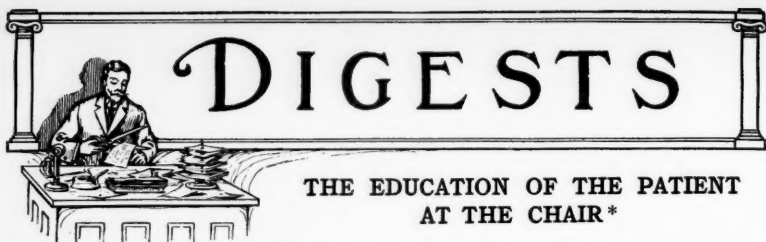
to the Paris Club. Do not neglect to familiarize yourself with it.—NEWELL S. JENKINS, D.D.S., *Items of Interest (The Dental Summary)*.

REGULATING INLOCKING UPPER CENTRALS OR LATERALS.—One of the most common irregularities noticed at an early age is the inlocking of upper centrals or laterals, frequently due to the excessively prolonged retention of the deciduous teeth. Treatment should be instituted as soon as possible, and the tooth or teeth moved into proper alignment. This movement may be effected in various ways. A jackscrew may be used, having one end attached to the permanent molar and the other to the lingual side of the tooth to be moved; or a spring of German silver wire may be employed, having one end attached to the molar and the curved end fitting under a lug on the lingual side of the tooth to be moved; or an alignment wire may be inserted, and by means of rubber bands or wire attachments the inlocked tooth or teeth may be drawn to place. The teeth being moved so as to occlude outside the lower ones, the trouble is at an end. The alignment wire, being outside the arch, is less cumbersome to the patient, and is perhaps preferable in cases where two or three teeth are moved, and which require some time for correction. It is also useful where centrals or laterals overlap. A collar tube soldered to it can be cemented to the overlapping tooth, and with the aid of a spring held by an alignment wire, rotated into place.—W. J. HILL, *Dominion Dental Journal*.

[A simple and effective way of accomplishing this is by preparing from an impression a bit of vulcanite fitting the crowns of three or four lower teeth and engaging the incisal edge of the inlocked tooth with an inclined plane. This is cemented to place upon the lower teeth and with every effort to close the mouth that tooth is forced forward by the inclined plane. Two or three days will do the work in most cases.—V. C. S.]

QUESTION.—What is the best way to polish a porcelain facing on teeth after grinding?—R. T. W.

ANSWER.—I polish ground porcelain, either with No. 1 sandpaper on laboratory lathe, or with emory cloth disk in handpiece, continuing to use same after grit is worn dull and until porcelain takes a very fair gloss; then finish to nice glaze with ordinary ground pumice on worn cloth plate-polishing wheel. Other answers are invited.—V. C. S.



THE EDUCATION OF THE PATIENT AT THE CHAIR*

(Concluded from the August number.)

BY G. R. WARNER, M.D., D.D.S., GRAND JUNCTION, COLORADO.

DISCUSSION

DR. W. C. CHAMBERS: The education of the patient at the chair is no doubt the most opportune and favorable method of obtaining satisfactory results. With a mirror in the hand of the patient we can, with the mouth mirror and suitable instruments, show him the exact condition of his mouth.

But there is something more that devolves upon us than merely showing patients the conditions as they exist. Aside from pointing out cavities of decay, irregularities of the teeth, irritated gums, pockets and abscesses, it is our duty to impress upon their minds the relation existing between diseased mouths and diseased bodies. In other words, how it is possible for them to be infected through the mouth. This is not always easily accomplished. Considerable tact is necessary, for when patients have been under the care of physicians in whom they have absolute confidence, and when nothing has been said to them about the mouth as a probable factor in any troubles they may have, our suggestion may not be received kindly; but when cases of this kind do arise, usually a word to the attending physician is all that is necessary.

Another thought that comes to me is this: Patients usually associate disease and pain together. With a great majority of people it is utterly impossible to conceive how they can have any disease of a serious nature without pain. Several years ago a lady came to me in Denver who had a little fistula under the right eye. She was well educated, could speak three or four different languages, and seemed to be a person of excellent judgment in every way. Upon examining her mouth I found four or five discharging abscesses between the central incisor and the third molar on the right side above. The process and, in fact, the right superior maxillary, was like a fragile egg, an egg with a thin shell, that could have been crushed with very slight pressure. Not being able to give her immediate attention, I referred her to Dr. Jackson, who took away some twenty-five or thirty pieces of bone, and all the

* Read before the Colorado State Dental Association, 1911.

teeth on that side, from the median line to the third molar inclusive. The entire right maxillary came away with the exception of the floor of the orbit. There was nothing remarkable about this loss of teeth and bone, except as it illustrates the point referred to, of associating disease and pain together. This lady stated that in all the progress of this disease she had never had pain, and did not suspect that she had any serious trouble. This merely goes to show the notion that most patients have, that it is utterly impossible to have disease without pain. It also illustrates the importance of frequent visits to the dentist for examination.

While this subject of diseased mouths is of paramount importance to us, we must remember that when these patients present, they feel quite differently about it, and I often think when subjects come up outside of our immediate calling, how little we know about them. For instance, what a limited knowledge have we about law, about farming, banking, or railroading! And so when patients come to us, they are unfamiliar with the conditions existing in their mouths, and have not the slightest conception of what the results will be if these conditions are not changed. If one of our number here should decide to embark in some other professional work, or take up some other line of business, he would simply be amazed when he came to learn the details. Our patients are in the same position; consequently it is our duty to show composure, and with kindness to impart to them just the knowledge we want them to have. As stated in the paper, they will frequently ask questions: "Why do my teeth decay?" "How did this abscess come about?" "Why do I have irritated gums?" "Why did this pulp die?" And that most interesting question, "What is pyorrhea?" Frequently a patient will say: "Mr. Jones never uses a toothbrush and has had no trouble. How do you explain his freedom from trouble, when I am using all precautions and my teeth are continually needing attention?" Such questions and statements open the opportunity for explanation and education.

IMPORTANCE OF PROPHYLAXIS

The importance of prophylaxis at regularly stated intervals is second only to the relief of pain. If neglected, the remaining tooth structures are jeopardized. The permanence of our fillings, our efforts to stop disease in the surrounding tissues, and really our reputation as dentists is jeopardized. With a little explanation of how bacteria, under favorable conditions, form gelatinous plaques upon the teeth, and how the acids exuded from them will dissolve the enamel just about as acids will etch marble, or as the hot sun will dissolve and produce

porous rubber or ice, the patient will soon grasp the idea that the unhygienic conditions in the mouth are the cause of primary and secondary decay. And while this urging of prophylaxis upon our patients is of the utmost benefit to them, we must remember that the permanence of our dental operations depends upon the care of the mouth by the dentist and by the patient. Our work is certainly temporary if the primary cause of dissolution is still operating in the mouth. Therefore, efforts in teaching our patients should be of mutual benefit.

EDUCATION OF CHILDREN

The paper touched upon the children, emphasizing the fact of their susceptibility to early impressions. If you can only impress a child early in life, those impressions are lasting, and another thing, the child usually tells about all it knows; if it has something good it is bound to tell the other children about it. The condition of the mouths of the schoolchildren is appalling. Reliable statistics show that 95 per cent. are suffering from some dental disorder. In some localities the percentage has risen as high as 97 per cent., and in no locality where the children have been examined has it run below 90 per cent. Dr. Evans, of Chicago, says that not only are these schoolchildren suffering with toothache and from discharging pus and the poisonous contents of the mouth, but there is great danger from harboring germs in the cavities of decay, and then he goes on to relate that numerous children who have had diphtheria and scarlet fever, have been discharged as cured and have gone out and given these diseases to other children through no other avenue than cavities of decay in teeth. Certainly there is opportunity here for coöperation on the part of the physician, parent and dentist.

EDUCATION OF PARENTS

What can we do in regard to the teaching of the parents? We must teach them that the mouth, unless scrupulously clean, contains many poisonous germs, and we must also remind them concerning the habits of these little children. How common it is for children to chew gum or candy for a while, and then trade it off with the other children! They think nothing of this. They place penholders, slate pencils and lead pencils in their mouths, or pieces of money, and then exchange them with other children. We should teach them the danger of biting into fruit that some other child has bitten into; of exchanging hats, caps and gloves; of picking at sores and hangnails; of drinking out of a cup or eating with a spoon that has not been washed, and so on. Then there are some other things. The parents are quite surprised when told

about the communicable diseases. They have not the slightest knowledge of the facts. They seem intensely interested when told that the communicable diseases, such as smallpox, chickenpox, diphtheria, scarlet fever, measles, mumps, whooping cough, ringworm and the itch, must be contracted through some one who has had them before. This is the opinion of the best medical authorities. If this statement is true, and if it is also true that disease is contracted through the mouth more than through any other avenue, it is certainly our duty to inform the parents that they may appreciate the importance of clean, healthy mouths. Opportunities for plucking the corn, to which the paper refers, seem unlimited. Consumption, typhoid fever and grippe come under the head of communicable diseases. Consumption we get from some one who has had it, or from drinking milk from a tubercular cow. Children are in the habit of putting their fingers in their mouths; then they unconsciously catch hold of a playmate, and in these careless acts diseases are contracted. It is good policy to suggest that they have the children wash their hands frequently, as they are inclined to put their fingers into everything that excites their curiosity.

Another suggestion. Have them breathe plenty of fresh air to eliminate germs; drink plenty of good fresh water, not too cold, and too much stress cannot be put upon that. When they have the children housed up, the temperature of the rooms should be 66 to 70, their sleeping room 55; if any colder the head should be covered for protection. Food should be taken near the temperature of the body, about 98, the lowest should be 40, and the highest 120. Parents will appreciate all these suggestions.

The doctor mentioned nasal constriction and mouth-breathers. A child with a healthy throat would, in a certain sense, be immune, while one with an inflamed tonsil would contract the disease, as the inflammation would offer good media in which the organism could grow and thrive. We all breathe germs of various kinds every day we live. While we are in a state of physical health we are strong enough to resist many germs, but when we are not, we readily contract any disease we come in contact with. He has also spoken of friendly relations between patient and practitioner. This is a most valuable asset.

DR. KETCHAM.—The education of the patient at the chair, as Dr. Warner says, educates the dentist as well. How many of us when we leave college think that our education is completed, while as a matter of fact it has only just begun. We have a great deal more to learn in the first three years after leaving college than we learned while we were

in school. So many of us are quite content when we leave school to do a fine piece of work and show that to the patient, and impress the beauties of that piece of work upon the patient's mind, and not try to impress upon the patient the care of that beautiful piece of work and the care of the other teeth which are beautiful when they are properly cared for. I have found that it is very easy to interest children in the care of the teeth. They do not do it very well, of course, but it is easy to interest them in it, and get them started in the right direction, and then keep after them week after week, and we will finally have children who take much better care of the mouth than they would had they not been under our care. We also find that it is possible to interest the parents of these children in the care of the teeth. Even the busy man, the busy multimillionaire, will take time, and is glad to take time to learn while he is in your chair, and the other men of business, and also the society women will give it the same care that the busy business man will.

DR. LINDSAY.—I wish to state that I fully appreciate the words of Dr. Warner's paper, and it seems to me that this is the time for the matter of oral hygiene and oral prophylaxis to be presented to the dental profession. There is not a man here who does not know that the mouths of the public are in a condition that is, to say the least, deplorable. I have the statements of reputable physicians that if you were to ask them what caused the most physical deterioration, alcohol or bad teeth and foul mouths, they would unhesitatingly say "foul mouths." I, of course, do not have anything to present nor any more than this to say about the education of the patient—that we cannot educate our patients unless we are properly educated ourselves along these lines. It would be folly for a man to stand before an intelligent patient, when he was ignorant of prophylaxis, and try to tell that patient something about the care of the teeth by prophylaxis. The patient would say, "Physician, heal thyself."

DR. BRIERLEY.—Along the line of educating the patient in the chair, I think the greatest reform I ever made was in a male patient. I had tried to be decent with him for a while, but one day I said to him: "If I were your wife, I would make you live in a ten-cent restaurant. Any old food you get is plenty good enough for you, because you spoil it, even if it is the best." That fellow really went out and started to clean up, and I think that little remark did wake him up, and he realized it was a waste of good food to give it to him, and he began to understand why he had all sorts of indigestion. So he started to clean his teeth.

DR. HOWELL.—I would like to make a confession, and I imagine that there are other dentists here who know just exactly how to teach oral

prophylaxis, yet do not do so. The reason why I do not always do it is because often I have not the time. I would like to know from Dr. James and Dr. Warner, these busy men (I understand both of them are so busy that they cannot take any new families into their practice), where they find the time, or to whom do they charge the time when they were doing this educating. I have done some educating myself, one patient may be waiting while I have worked overtime on the preceding patient. I have not the time to take ten, twenty or thirty minutes, and sometimes more, to try to make each patient understand what oral prophylaxis means; what it may mean in the end to him, and the doctor's bills it is bound to save. It takes time. I would like to ask these gentlemen do they charge up this instruction to profit and loss, or do they charge it to the patient as he goes along. I think this is why a great many of us do not teach oral prophylaxis as we should to each and every patient. I wish Dr. Warner, in answering, would speak to this point.

DR. WM. SMEDLEY.—I would like to quote history to help our friend, Dr. Howell, out a little. I will refer to Dr. Atkinson, of New York. He once had a patient who had a son who constantly plied him with questions. The parent said to him: "I wish you would take a little time and answer Johnny's questions. He has a very inquiring mind." Dr. Atkinson did so, and when the bill came, there was an item which read, "Answering Johnny's questions, \$300."

DR. JAMES.—I want to say one word before answering our friend's question, as to the best way to educate a patient in oral prophylaxis, and that is to do oral prophylaxis for him. This takes time, and when you do work, and give your patient your time, you have to charge for it. If anybody thinks he can educate a patient on oral prophylaxis without doing work, he is mistaken. It requires just as much work and just as much time as when filling a tooth, or crowning a tooth, or any other dental operation. The important thing is to get it down to a definite plan, a definite system of procedure, so that you get results that the patient is aware of. When they get that they know they have something.

DR. WARNER.—Dr. Varley spoke about the dignity of the profession. That is a thing that has never worried me very much. A good many people are on their dignity all the time. They are worrying over their dignity. I think if any man conducts himself as he should, his dignity will take care of itself. As the water will not rise above its source, the dignity of a profession will not be any greater than the dignity of the members thereof. Many court the good opinion of physicians. I do not

think we need to court it at all. If we conduct ourselves as we should, we will not need the good opinion or good words of physicians, but we must bear this in mind, that the medical profession as a whole has done, and is doing, a great deal more for humanity at large than the dental profession, but it is not necessary that this should be so. We have just as large opportunities as the medical profession, and in many instances larger, and if we use our opportunities, we will not need to ask the medical profession for commendation. We will get it from where it ought to come—from the people themselves.

Dr. Chambers spoke of the wide field. I think that cannot be emphasized too strongly. Dr. Hoffman spoke of the retroaction of this instruction, and I am impressed by this thing every day, and in preparing this paper, I assure you that I got a great deal more out of it than any of you possibly could. If any of you, or all of you, take up this subject, and in any case or number of cases attempt instruction, you will find that you are learning a good deal more than you are teaching your patients.

Some one suggested that it is hard to correct a patient who is not caring for her mouth without giving offense. It is not what a person says so much as how it is said that counts, and I find that I am able to say very blunt things, saying them in a proper way, with a pleasant smile, without giving offense. I frequently say to a patient, "I see you are not working for the druggists. I am in league with the druggists, and I want to have toothbrushes worn out just as fast as possible, and you are not wearing out your toothbrush rapidly enough." No one fails to see the point, thus put in a joking way. One gentleman said that I overlooked the matter of personal instruction to my patients. I think I said that we should have the patient take a toothbrush in his hand, and take his hand in ours and demonstrate actually how to use a toothbrush. This is something I do every day almost, and with children particularly. It is very interesting to them. And it is astonishing how few children or adults know how to hold a toothbrush, and how to handle it. I prescribe a toothbrush for every individual case. I examine the mouth, I find out how the teeth are set, whether they are regular or irregular, the distance between the surface and the upper and lower teeth, and then I prescribe a toothbrush to fit that case. Occasionally I order a toothbrush from a drug store, and take a pair of scissors and cut it to fit the mouth.

I purposely left out the matter of fees. I do not find patients objecting to my charge for my time, no matter what I am doing, whether I am instructing them or working with them. I instruct as I work, as Dr. James said, and if I am instructing, I am working. I always con-

sider that my first duty is to the patient in the chair. I have accepted that patient, I have accepted tentatively his fee, and my first duty is to him. I do not have any concern about anybody waiting, because I can work for only one person at one time, and if I am doing that carefully and conscientiously, I am doing my whole duty. I think if we would all get that idea into our heads, we would do a great deal more for our patients.

Dr. Watson spoke of the idea of not being selfish in this matter. If we are true gentlemen, true professional men, we are not doing this with a selfish aim. We are doing it with the single and sole purpose of doing all we can for our patients. I want to bring that out with all possible force.—*Items of Interest.*

TEETH AND HEALTH*

(Concluded from the August number.)†

By C. N. JOHNSON, D.D.S., L.D.S., CHICAGO, ILLINOIS.

I want to refer to another fact that shows the important influence upon human health of the condition of the teeth. Everybody knows that toothache is bad, but there is still another factor to be considered. If you have not a good set of teeth you cannot masticate well, and if you do not masticate well you do not digest well. Faulty digestion leads to faulty assimilation, and this to bad nourishment. Faulty nourishment in a child growing up will bring about results that you little dream of. Among other things, it will develop a craving for stimulants. I once heard an eminent minister argue that much of the drunkenness among men was due to bad cooking; that the system craved for stimulants when illy nourished by bad food. If this be true, what shall we say of the growing boy or girl whose teeth are so neglected that the food, no matter how good it may be, cannot possibly be prepared for nourishment? I believe there are many men who are drinkers today because they have not been able to masticate their food properly, and I believe that there are many of the ills of life that can be traced to this cause.

I have been told sometimes that this contention will not hold, because there is old "Aunt Hannah" or "Aunt Jane," who has lived

* Address delivered in St. Mary's Hall, Toronto, April 26, 1912.

† This article was commenced in the August number.

so many years without any teeth in her head at all. Nature becomes very tolerant of abuse, and people may lose one tooth after another, and the system adjusts itself to the new condition; but, remember, Nature takes her toll sooner or later, and in many instances, when the individual is taken sick and everything is done by the nurse and physician that can be done, the patient drops lower and lower, does not respond to remedies, and by and by succumbs, because of a cause that lies further back, and, in many instances, came from the loss of the teeth, which nobody at the time thought very important.

I have said that we have no right to bring up children without giving them the benefit of the very best we can do for them physically, mentally, and morally. I do not know whether any of my audience have ever heard of Mr. Horace Fletcher, but I want to say that he has done more to direct the attention of the world to the necessity for good mastication than anyone I know of, and he is neither a physician nor a dentist. We had him in Chicago some time ago, and he lectured to an audience of about 3,000. He has given us a new English word—"Fletcherism"—which means perfect mastication.

There is no doubt but that thorough, intelligent mastication is of the greatest importance, and I am going to whisper in your ear that it will do more to reduce fleshy people and build up thin people than all the drugs in the market.

If dental disease is so serious it is about time that we began to look into the matter and see how prevalent it is. We have been doing that in Chicago, and we have examined about 28,000 children, and in that vast number of children we have found that about 95 per cent. are in need of dental service; and that brought us face to face with a problem that seemed to be one of the most serious that we had ever had to face. We have in Chicago about 400,000 pupils, and last year there were 8,000 children who missed their grades, simply due to the fact that they were handicapped by bad teeth, and the city is at the expense of teaching them these grades all over again; and, to say nothing of the loss of time to the children, it costs the city nearly \$300 to make up that defect. In addition to the fact that the child has been handicapped in its race in life, we have felt that that was a matter for the city authorities, and we have impressed this upon them so that we have got them to appoint a dentist as one of the members of the board of health of that city; for we felt that it was the truest kind of economy in dollars and cents that the city should furnish some kind of care for these children, whose parents were too poor to have them cared for in the regular way.

We have examination blanks that are made in triplicate—one copy

for the board of health, one for the dental society, and one for the parent or guardian of the child—setting out the condition of the children's teeth; and, on the reverse side, there is the statement, signed by the superintendent of schools, that the teeth should be put in good condition, and that free infirmaries are being inaugurated whereby poor children can be cared for. I bring you a message this afternoon which makes me proud of the fact that I live in that great city. It so happens that I am the chairman of the Public Service Commission of the Chicago Dental Society, and have taken the interests of the work very much to heart. We were not able to get the council to take up that work and give us the financial aid that we hoped for, and so we started out to raise funds. We now have the equipment for four free dental infirmaries in Chicago, and we have had voluntary service on the part of a number of dentists to man these infirmaries and others to make the examinations. You can easily understand that to examine 28,000 children is no small task. The waiting list at these infirmaries became so great that it proved the urgency of the work, and within the last two or three weeks we have received the assurance of one of the public-spirited citizens of Chicago that he will equip six additional free dental infirmaries, making ten in all, and that he will maintain these infirmaries indefinitely, out of his own resources, until we can prove to the city authorities that this is their legitimate work and it will be taken over by the city. He has pledged \$10,000 a year for salaries to operators.

I am not in favor of any individual providing the means necessary for this work, except as a temporary expedient. My dream at one time was to have a fund created by private contributions, and that the income from this fund should be sufficient to take care of these children; but the more I study the matter the more I become convinced that it is the direct duty of the city or the state to take care of these children. So we have this understanding that, as soon as we convince the City Council of Chicago to take over that work, and have it done under the public department of health, where it properly belongs—just as soon as that can be done, I want his private support to cease. I think that the burden should fall upon the people, because it is for the benefit of the people. This movement brings up the question of indiscriminate charity; and I believe that many of the charitable organizations, often with the best intentions in the world, do more harm than good. I believe that the moment anybody—man or woman—reaches out the hand and accepts something for nothing, that moment there begins a disintegration of character in that individual. So that our idea is to limit this to the children that have a right to be cared

for, and clauses to this effect will be placed in the proposed agreement which I am now drawing up. At the same time, no matter who comes to these infirmaries, if he is suffering with pain, that pain is to be relieved instantly, without any question whatever as to the richness or poorness of the individual. It is the fundamental duty of every professional man to relieve pain at all times and under every circumstance. We have in Chicago what we call a school nurse; she goes into the homes of the children and notes the conditions under which they are living—the wages earned, etc.—and reports back to the infirmary; and it is only on the recommendation of the nurse, or a recognized authority in women's work, that we will render dental service, such as filling and other repair work of that kind. We do not wish to do more harm than good.

It is impossible for me to go into some of the details of this question as I should like to, but I want to refer to a movement that has been made in the city of Cleveland, showing whether or not dental service does mean anything to these children. A school was selected in the poorer district, and a certain squad of twenty-seven children were taken and their records for a year carefully looked up and noted. A psychological test was made, not by a member of the dental profession, but by a man who was entirely outside of this work; then a similar test was made after a year's experiments, and, after their teeth had been cared for by the dentist and they had been taught how to brush their teeth and properly masticate their food, it was found that these children, who had been failing in their grades year after year, now made their grades in every instance; and the test showed that their psychological efficiency had increased over 98 per cent.

This movement does not mean merely the physical improvement of these children, but it means the mental improvement as well; and when you improve a child mentally you improve him morally, too. I said that these neglected children craved stimulants; one of the boys in that school had been in the habit of drinking six or eight cups of coffee every day. His little system was not properly nourished, and he wanted that stimulant. After he had received proper care for a year there was a great improvement in his physical condition, and he was able to give up the coffee, because he was now properly nourished, and did not need that stimulant.

I want to refer to some other things. We have not the right to bring a child into the world and allow him to grow up under a handicap in any way. We have specialists who attend to irregular teeth, and some of these poor children need to have their teeth cared for in that way; and I can illustrate by a little story out of my own experience,

how a defect of that kind may handicap a child through life. When my own daughter was attending school in the East and came home on occasional visits, she always did a good deal of talking about a certain Miss Blank, who was a teacher in the school. She spoke of her oftener than of the principal, and I said to her: "How is it that you are always talking about Miss Blank? Who is Miss Blank?" "Why," she replied, "she has the brains of the institution. Everything is referred to her. If it is a matter of education, or even a matter of administration, it is always settled by Miss Blank." Then I asked: "Why isn't she principal of that school?" My daughter hesitated a moment and said that she was everything that she had told me, but somehow she could never imagine Miss Blank being principal of any school.

Later on, at commencement, I visited that school, and was introduced to Miss Blank. Instantly I saw why she could not be principal of a school. Her physical appearance would not permit it, because her teeth had been neglected, as a girl, and were protruding so that her upper lip could not by any possibility cover them. It was a serious defect in that dear woman's face, and it might have been remedied if it had been attended to in time. It was a lamentable handicap, because but for that she could easily have been principal of any school.

Out in a Western city they have a condition to contend with whereby the children have what are called mottled teeth—that is, there are discolored places on them, so that as you look at the little children they give you a weird impression of something uncanny. There is something in the environment of the place which causes this defect. There were two young ladies who had completed their course in the school and, after studying, had obtained their teachers' certificates and applied for positions in the school. They were refused on account of this defect in their teeth, the superintendent claiming that he could not place before his pupils any teacher with such a defect. The incongruous feature of the case was that these girls had been educated in these very schools. The council of this city is at last awakening to the necessity of investigating the cause of the trouble. In this age, when everyone is working so intensely, and when we are talking so much about the survival of the fittest, we want to bring our children up so that they shall be fit to survive.

A short time since, I was lecturing in the city of Edwardsville, Illinois, and we had about 1,200 people in the hall, and I was told of an occurrence that took place after the lecture that has left with me a very vivid impression. I made the same statement there that I have made to-day—that it was wrong to bring a child up handicapped physi-

cally, and I was told that after the lecture a little lame girl followed me to the hotel and watched me while I got into an automobile, which was waiting there to take me for a drive around the city. I didn't see the little girl, but I was told that she followed me with a wistful expression as long as she could see me. If I had seen her I never would have left that city without knowing something of the history of that child, and if it had been possible to do anything for her I would have had it done. The superintendent of schools had arranged to take me round the city in an automobile; and, while that was interesting, I say that that little girl had more claim on me that moment than the Governor of the State of Illinois. I have written down there about her, and as sure as they find her I will have that little foot straightened, if it can be straightened.

I have detained you longer than I intended, but I wanted to say something about the care of children's teeth. First, there are the baby teeth; and the general impression is abroad that because it is a baby tooth it does not matter very much. That is wrong, because a little child is a bundle of possibilities, and takes on habits very easily, which are frequently never left off. One fortunate thing is that a good habit is just as hard to break as a bad habit. If that is true—and I believe it, for if it were not true we would not be to-day a bit better than heathen—then it is important for us to form good habits in childhood. A cavity develops on one side in these baby teeth, and there is a little tenderness, and the habit is formed of turning the food over to the other side; and, suppose a cavity develops in the other side, the child forms the habit of bolting its food without chewing it at all, and that habit stays with it in after life. If you don't believe it, go into any restaurant and watch the way the people masticate their food. Some will masticate thoroughly and others will simply bolt their food; and this arises very often from habits formed in childhood. Keep the teeth comfortable, so that the child can masticate thoroughly and comfortably, and it will grow up into a healthy man or woman. The tooth, of all others, that I wish to speak of comes in behind these baby teeth. It simply creeps in, without attracting any attention, about the sixth or seventh year. It is called the first permanent molar; it is just behind the baby teeth, and for that reason a mother will sometimes let that tooth decay, under the impression that it is a baby tooth. It is the most important tooth—the tooth that maintains the proper relation between the jaws, the keystone of the dental arch—and if you lose that first permanent molar you have lost in that particular mouth a force of character that you can never replace. This Miss Blank that I was speaking of had probably lost her first permanent molars, and there

was too much overbite, as it is called, and that can never be fully restored when that tooth is gone. Dentists can do much with teeth, and it is the easiest thing in the world to save that, if it is taken in time. In the baby set there are twenty teeth altogether—ten above and ten below. If you start in the center of the mouth and count five teeth each way, any tooth back of that is a permanent tooth; and I would advise you to look into this matter, and if this first permanent molar is there, by all means have it saved. It is likely to decay, because it comes in early and decays easily and rapidly.

Mr. Chairman, I want to express my appreciation of this splendid audience coming out on such a day as this. I accept it as a tribute, not to myself, but to the very important subject with which we are dealing to-day, and I am sure that, whatever the future holds for us, one thing is certain—our children are to be better cared for than they have ever been in the past. I want to thank the committee for bringing me over here. I was born out here, and I am always glad to come back, and particularly on this occasion, to bring this message to you.—*Dominion Dental Journal.*

A PLEA FOR ELIMINATION

THERE is one expression which has crept into dental literature which seems to us very unfortunate. Where it had its origin we do not know, but we make a plea for its elimination. This is the phrase "American Dentistry." There is no such thing, or at least there should not be. Dentistry is dentistry the world over, and if the practitioners of different countries have their distinguishing characteristics, there is no reason why so much should be said of American dentistry any more than of English dentistry, or Spanish dentistry, or German dentistry, or French dentistry, or Burmese dentistry. We can see nothing in the situation to entitle American practitioners to the distinction of having the dentistry which they practise singled out as something apart and separate from that practised in other countries, and we never see the phrase "American Dentistry" that we do not view it with alarm. It implies too much that is akin to the suggestion of superiority over other dentistry, and the reason we are alarmed is because the most dangerous thing for the profession of any country to do is to assume superiority.

Such an assumption is usually the precursor of deterioration, and the moment we of America begin to think that we are a whit better than the profession of any other land that moment we start on the

toboggan slide to degeneration. Let us look the matter squarely in the face, and if we are sufficiently broad-minded we shall see that dentistry in other climes is making great strides and that we can learn much from our confrères abroad. If we study the journals of other countries we are astonished at the progress therein portrayed.

There is nothing so withering as self-conceit, and we have a fear that there has been some self-conceit behind the phrase "American Dentistry." Let us have an end to this expression, and let us all work together for the common good of dentistry the world over. Let Americans be broad enough and modest enough to see the good in others and not relegate, even by inference, any superiority to themselves. This will be better for everyone—most of all for Americans.—*The Dental Review*.

A HOME FOR INDIGENT DENTISTS

IN our March issue we published a communication from the committee appointed by the National Dental Association to establish a fund for the aged and indigent of our profession. In the same issue there appeared an appeal from Dr. J. E. Story, of Texas, in which he suggests "a beautiful home on the outskirts of some centrally located little city, which would be maintained by contributions donated by members of the different dental societies." At Birmingham, Ala., March, 1909, Dr. Jas. McManus read a paper before the National Dental Association, entitled "A Side Light on Professional Interest" (*Dental Cosmos*, July, 1909), in which he described the British Dental Benevolent Association and the advantages accruing to its members.

There is no doubt that it would be a wise and a worthy achievement to organize our profession in some way that would assure a place of rest for our worthy but indigent old men, of whom, unfortunately, there have been all too many in the past, as there will undoubtedly be in the future.

The suggestion advanced by the committee that each member of every state society should pay \$1 per annum into such a fund is a good one if it could be carried out. The committee tells us that the plan has been adopted by the Kentucky and Tennessee societies, and that other Southern states have agreed to do so if the National Association approves the plan. If the writer is not mistaken, the New Jersey State Dental Society was the first to increase its dues \$1 per year, this additional dollar to be set aside for the assisting of those in need.

DIFFICULTIES

Assuredly \$1 per annum from each member of all our state societies would yield a goodly sum, one that in time might enable us to realize Dr. Story's ideal proposition. But the addition of even \$1 per annum to state society dues is not so easily accomplished just at this time. One might say the psychological moment for the urging of this plan has not quite arrived. We are in the throes of reorganization throughout the country. National, state and local societies are all at work on the problem, and this question of additional dues is a factor, one might almost say a stumbling block, everywhere. State societies are asking local societies to increase their dues \$1 or \$2 per annum and join the state society in a body. The National Association is asking the state societies to add \$2 to their membership dues and bring their men into the enlarged National. In some sections dentists are being asked to approve of legislation which will compel them to reregister annually and pay a fee of \$1, thus creating a fund with which to prosecute illegal practitioners. In other sections we hear of adding \$1 annually to society dues, the members so subscribing to be protected in the courts against the machinations of blackmailers who bring malpractice suits.

Many other worthy objects are heard of which might be supported with \$1 per year from society members. But just at this time the most important project of all is the reorganization of local, state and national associations into one grand brotherhood of American dentistry. Grant but a few years for the accomplishment of this, and it will be easy enough to take care of our indigent old men, yea, to give them a beautiful home in their declining days, with trailing arbutus to afford them shade and the aroma of sweet flowers to scent the air.

PLAN FOR COLLECTING FUNDS

There is a plan, however, which might be put into effect immediately. The Red Cross Society receives tremendous sums of money annually through the sale of its Christmas seals. Thousands of dollars have been contributed by dentists to this very fund.

Why not adopt a similar plan for the benefit of our own brethren? The National Association Committee might distribute Christmas seals, which could be placed on sale in every dental depot in the country. Packages of the seals could be sent about November 1st to every dental society in the United States. Thus, through the agency of the dental depots and the dental societies, we would reach all in the profession,

whether society members or not. If it were understood that the proceeds would be devoted to the worthy old men and the infirm of our profession, the sales ought to be large. Why not give this plan a trial?—
Editorial from *Items of Interest*.

SOCIETY AND OTHER NOTES

Officers of Societies are invited to make announcements here of meetings and other events of interest.

INDIANA.

The Northern Indiana Dental Society will be entertained this year at Sylvester Lake, Rome City, September 3d and 4th.—ROBERT GILLIS, *Secretary*.

NEW HAMPSHIRE.

The eighteenth annual meeting of the Northeastern Dental Association is to be held in the Crawford House, Crawford Notch, October 1-2-3, 1912.—ANDREW SAWYER, *President*, EDGAR O. KINSMAN, *Secretary*.

TEXAS.

The next meeting of the Texas State Board of Dental Examiners, for the purpose of examining applicants for a license to practise dentistry and dental surgery in the State of Texas, will be held in Austin, Texas, December 9th, 1912, at 9 A. M.—J. M. MURPHY, Temple, Texas, *Secretary*.

NATIONAL DENTAL ASSOCIATION

WASHINGTON, D. C.

September 10th to 13th, 1912

OPENING SESSION.

The Association will be called to order at 10 A. M., September 10th, in the Convention Hall of the New Willard Hotel. (Headquarters.)

Invocation—Rt. Rev. Alfred Harding, Washington, D. C.

Address of Welcome—Hon. Cuno H. Rudolph, Washington, D. C.

Response to Address of Welcome—Frank C. Hetrick, Ottawa, Kansas.

President's Address—Arthur R. Melendy, Knoxville, Tenn.

Modern Dentistry in Germany—Newell S. Jenkins, Dresden, Germany.

PROGRAM FOR GENERAL SESSIONS AND SECTIONS.

L. F. Kebler, M.D., Washington, D. C., "Oral Dental Preparations"; F. E. Stewart, M.D., Philadelphia, Pa., "Standardization of Materia Medica"; M. C. Smith, Lynn, Mass., "What the Government is Doing to Prevent Diseases"; William O. Hulick, Cincinnati, Ohio, "Crown and Bridge Work"; J. V. Conzett, Dubuque, Iowa, "Something About Cavity Preparation for the Gold Inlay"; Leon S. Medalia, M.D., Boston, Mass., "Pyorrhea Alveolaris, Its Causes and Treatment

with Vaccine"; George B. Harris, Detroit, Mich., "Pyorrhea, Its Treatment by Bacterial Vaccines and Results of Animal Experimentation"; C. M. McCauley, Abilene, Texas, "The Great Need of Improvement in Quality of Commercial Alloys"; B. Holly Smith, Baltimore, Md., "Aristocracy in Dentistry. Do We Need It?"; W. A. Lovett, Birmingham, Ala., "In Hoc Signo Vines"; H. H. Johnson, Macon, Ga., "Other Methods of Making Gold Inlays"; W. R. Clack, Mason City, Iowa, "Extension for Prevention vs. Pin Head Cavities"; Joseph Head, Philadelphia, Pa., "Intimidation of Dentists and Dental Societies"; J. J. Mollitt, Harrisburg, Pa., "The Treatment and Filling of Root Canals"; M. L. Rhein, New York City, "Oral Sepsis and a Consideration of Its Systemic Effects"; J. F. Biddle, Allegheny, Pa., "Diagnosis and Treatment of the Important Destructive Diseases of the Dental Pulp"; Thomas B. Hartzell, Minneapolis, Minn., "Post-Operative Treatment of Pyorrhea Alveolaris" (Illustrated by Stereopticon); Harvey W. Wiley, M.D., Washington, D. C., "A Consideration of the Effects that Impure Food and Adulterated Drugs Have Upon the Human System"; George E. Hunt, Indianapolis, Ind., "Teeth and Health."

(The last two subjects to be given as lectures at the Wednesday evening session.)

Information regarding railroad rates may be secured from your local agent, as conditions vary in different sections of the country. Any agent will gladly furnish any information requested.—HOMER C. BROWN, *Recording Secretary*, 185 East State Street, Columbus, Ohio.

THE CLINIC OF THE NATIONAL DENTAL ASSOCIATION

The Clinic Committee desires to extend to all members in good standing of all dental societies a cordial invitation to attend and to clinic at the "all-day" clinic of this Association to be held at the New Willard Hotel, Washington, D. C., Friday, September 13th. The enormous ball room, top floor of this hotel, has been secured and the management promises us every convenience.

We wish particularly to call your attention to the classification of the different clinical material, where every effort will be made to arrange the different events according to title and in sequence so that the various "steps" in the operation may be seen at a glance, without the usual regard to chair or table; this will avoid confusion and save time, allowing the members to select and study favorite subjects without hunting all over the room.

From the material now in hand your committee can promise a large and varied clinic. That we may assemble all clinicians' names and titles for the preliminary programme, kindly reply at once to Clarence J. Grieves, Chairman Clinic Committee, Park Ave., nr. Madison St., Baltimore, Md.

MEETING OF NATIONAL ASSOCIATION OF DENTAL FACULTIES

The National Association of Dental Faculties will meet at the New Willard Hotel, Washington, D. C., on Friday and Saturday, September 6th and 7th. The Executive Committee will meet at nine o'clock Friday morning, the general meeting opening at ten o'clock the same morning.—GEORGE EDWIN HUNT, *Secretary*.

SOUTHERN BRANCH OF THE NATIONAL DENTAL SOCIETY

The Fifteenth Annual Meeting of the Southern Branch of the National Dental Association will be held jointly with the National Dental Association at Washington, D. C., September 10-13, inclusive.

Only a short business session will be held for the election of officers and transaction of such other business as may be brought before the meeting.—THOMAS T. MOORE, *Secretary*.

ATTENTION,
MEMBERS OF THE DENTAL PROFESSION OF THE UNITED
STATES OF AMERICA

The Fifteenth International Congress of Hygiene and Demography is to be held in Washington, D. C., September 23-28, 1912, under the auspices of the United States Government.

This is the most important meeting of this kind held in this country in its history, and the United States Government is acting as host to the fifteen nations that have so far signified their intention of participating in the coming congress.

This organization is the highest authority in matters of hygiene in existence to-day.

Through the courtesy of the United States Government, the dental profession of this country has received an invitation to contribute to the success of the coming congress. A place has been made for representatives of the dental profession, both upon the literary programme and among the exhibitors. This is the first time that the dental profession of this country has received such recognition by the home government.

The opportunity for which we have been seeking, that is, the opportunity to show the important relation the human mouth bears to the health, strength and welfare of mankind, is now before us.

The influence of this congress is world-wide in its scope, and will be visited by thousands upon thousands of people who are interested in hygiene and the general welfare of mankind.

If American dentistry is to maintain its reputation throughout the world it behooves the members of the profession of this country to unite in a general effort to have the largest, finest and most instructive dental exhibit in the history of dentistry assembled on this occasion.

At the request of the Oral Hygiene Committee of the National Dental Association, Dr. J. W. Schereschewsky, U.S.P.H. and M.H.S., director of the exhibition, has set aside 1,000 square feet of floor and 500 square feet of wall space in the building, which is being erected for the exhibits, to be devoted for the use of the dental profession for exhibit purposes.

At the meeting of the Oral Hygiene Committee of the National Dental Association, held in Cleveland, March 23, 1912, a resolution was passed, inviting the oral hygiene committees of all state and local organizations to coöperate with it in making a success of this exhibit. Space will be assigned in such a manner that each state, city and town will receive full credit for contributions in this direction.

The Committee earnestly requests that every member of the profession who is interested in mouth hygiene and the welfare of the dental profession become actively interested in a campaign to make a success of this exhibit. The oral hygiene committees of the State Dental Societies should endeavor to place themselves in touch with local organizations in their states in an endeavor to secure aid in the way of material suitable for exhibits, and in money to defray the expenses of such an exhibit as this should be. The Committee would ask that each state and local organization make appropriations to meet the expense of collecting, mounting and displaying such material as would make a creditable exhibit.

The Committee requests that the oral hygiene committees that can or will take part in this exhibit communicate at once, or at the earliest possible moment, with Dr. W. G. Ebersole, Chairman of the Oral Hygiene Committee of the National Dental

Association, 800 Schofield Building, Cleveland, Ohio, or for local information to Dr. W. Smith Frankland, The Burlington, Washington, D. C., Assistant Secretary-Treasurer of the National Mouth Hygiene Association for the District of Columbia.

The Oral Hygiene Committee of the National Dental Association instructed its Secretary, Dr. Waldo E. Boardman, of Boston, Mass., to communicate with Dr. William H. Potter, of Boston, Mass., with a view of obtaining some idea of the dental exhibit which was shown at the International Hygiene Exhibition in Dresden, May-October, 1911. Dr. Potter's letter is given herewith, with a view of giving some idea of how to build or prepare an exhibit of this kind.

"DEAR DOCTOR BOARDMAN:

"Boston, April 13, 1912.

"In regard to the Dental Exhibit at the International Hygiene Exhibition in Dresden, May-October, 1911, I am obliged to rely upon my memory, inasmuch as I was unable to find a catalogue of this portion of the department. There were in the exhibit as follows:

1. Large numbers of anatomical specimens. Skulls: parts of skulls with teeth in place. In this respect, it was similar to the exhibition in connection with the Fifth International Dental Congress at Berlin, 1909.
2. Orthodontia cases represented by models. Regulating apparatus.
3. Teeth representing the progress of decay from the initial softening to the large destructive cavity.
4. Charts showing the percentage of dental decay among people of various occupations and living under various conditions.
5. Charts showing the influence of food and water (hard or soft) upon the percentage of dental decay.
6. Charts giving rules for the prevention of decay.
7. School dental clinics. A description of the most important ones of Europe, with literature giving statistics and methods of work.
8. The analysis of saliva. Charts showing the method employed.

"These are a few of the features. There were many more which I wish I could remember.

"Very truly yours,

"WILLIAM H. POTTER."

Let every member of the profession who is interested, write, offering to do his part. Do not wait for us to write to you, for we have much to do if we undertake to make a success of this work.

At the same meeting the Oral Hygiene Committee of the National Dental Association passed a resolution, inviting the dental colleges of this country to contribute to the success of the dental exhibit; and the secretaries or deans of the various colleges are requested to communicate either with Dr. W. G. Ebersole or Dr. W. Smith Frankland, indicating what aid they will give in connection with the coming exhibit. The exhibit will be so arranged that each college will be assigned space for its own exhibit.

Come to our aid, and give us your hearty support in this work.

Appealing to every member of the profession to become actively interested in this exhibit in the interest of the dental profession as a whole, we are,

Respectfully yours,

THE ORAL HYGIENE COMMITTEE OF THE NATIONAL DENTAL ASSOCIATION,

W. G. EBERSOLE,
B. HOLLY SMITH,
WALDO E. BOARDMAN,
J. V. CONZETT,
S. W. FOSTER.

EXAMINATION OF DENTISTS FOR THE U. S. ARMY.

The Surgeon-General of the Army announces that examinations for the appointment of Acting Dental Surgeons will be held at Fort Slocum, New York; Columbus Barracks, Ohio; Jefferson Barracks, Missouri; Fort Logan, Colorado; and Fort McDowell, California, on Monday, October 7, 1912.

Application blanks and full information concerning these examinations can be procured by addressing the "Surgeon-General, U. S. Army, Washington, D.C."

The essential requirements for securing an invitation are that the applicant shall be a citizen of the United States, shall be between 21 and 27 years of age, a graduate of a dental school legally authorized to confer the degree of D.D.S., and shall be of good moral character and habits.

Acting Dental Surgeons are employed under a three years' contract, at the rate of \$150 per month. They are entitled to traveling allowances in obeying their first orders, in changing stations, and in returning to their homes at termination of service. They also have the privilege of purchasing certain supplies at the Army commissary. After three years' service, if found qualified, they are promoted to the grade of dental surgeon with the rank of first lieutenant, and receive thereafter the pay and allowances appertaining to that rank.

In order to perfect all necessary arrangements for the examination, applications must be in the possession of the Surgeon-General at least two weeks before the date of examination. Early attention is therefore enjoined upon all intending applicants. There is at present a large number of vacancies to be filled.

PATENTS

- 1,021,527. Dental hand porte-polisher, James W. Ivory, Philadelphia, Pa.
- 1,021,528. Fastening for artificial tooth crowns, James W. Ivory, Philadelphia, Pa.
- 1,021,065. Guard for dental instruments, James Neil, Jr., New York, N. Y.
- 1,021,639. Mouth-mirror, Howard R. Smith, Washington, Pa.
- 1,021,865. Narcotizing mask, Karl A. E. Fries, Stockholm, Sweden.
- 1,022,070. Anchorage for dental bridges and plates, Steele F. Gilmore, Indianapolis, Ind.
- 1,022,316. Sanitary dental waste-receptacle, Thomas S. Harlan, Salt Lake City, Utah.
- 1,021,927. Fountain-mold, Thomas J. Harrison, Sabula, Iowa.
- 1,022,139. Rotary toothbrush, Joseph Horn, Philadelphia, Pa.
- 1,021,893. Dental post-extractor, Thomas W. Ross, St. Louis, Mo.
- 1,022,055. Artificial tooth articulator, Marcelino Weiss, Havana, Cuba.
- 1,022,838. Dental broach, Levi L. Funk, Chicago, Ill.
- 1,023,641. Toothbrush holder, George T. Greer, Roanoke, Va.
- 1,023,213. Dental impression cup, Miecislaw Mareks, Lubeck, Germany.
- 1,023,273. Dental regulator, Herbert A. Pullen, Buffalo, N. Y.

Copies of above patents may be obtained for fifteen cents each, by addressing John A. Saul, Solicitor of Patents, Fendall Building, Washington, D. C.

